Eli Lilly and Company 1984 Annual Report

Lilly

Eli Lilly and Company is a research-based corporation that develops, manufactures, and markets human medicines, medical instrument systems, agricultural products, and cosmetics. The company markets its products in more than 130 countries around the world. Corporate headquarters are located in Indianapolis, Indiana, U.S.A.

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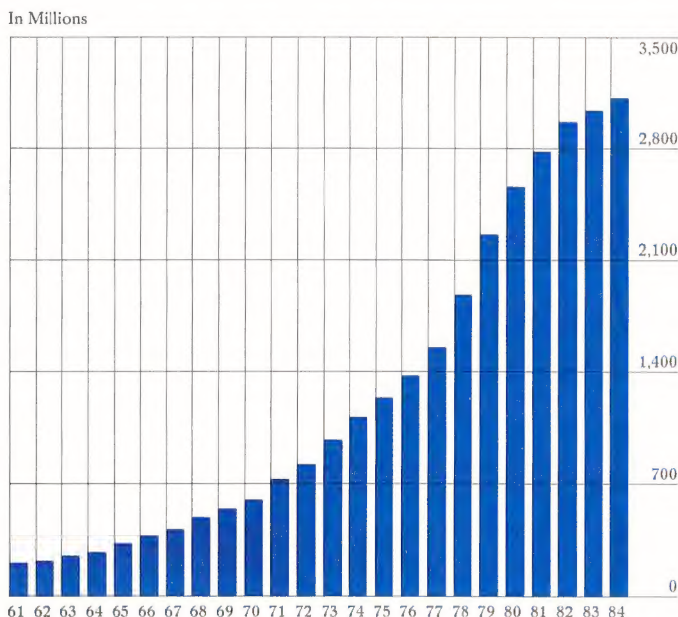
1984 Financial Highlights

Eli Lilly and Company and Subsidiaries

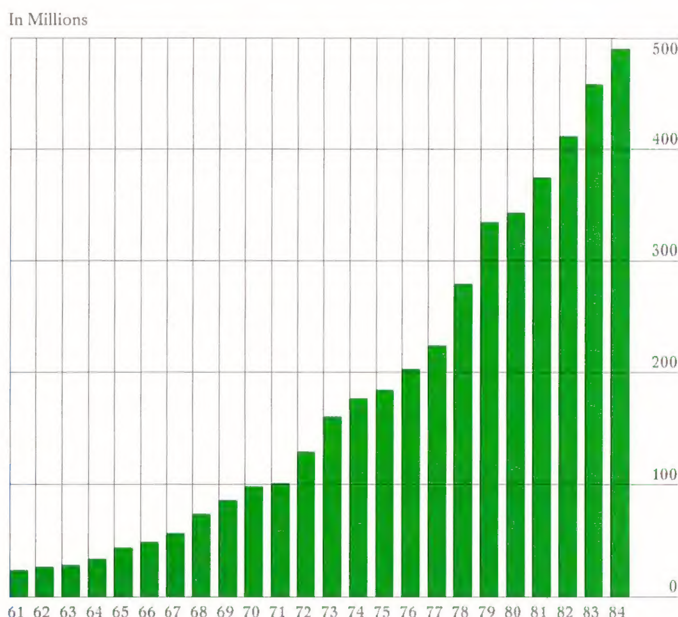
(Dollars in millions, except per-share data) December 31	1984	1983	Change
Net sales	$3,109.2	$3,033.7	+ 2%
Net income	490.2	457.4	+ 7%
Earnings per share	$6.73	$6.13	+10%
Dividends paid per share	2.975	2.75	+$.225
Research and development expenses	$ 341.3	$ 293.6	+16%
Capital expenditures	205.3	199.9	+ 3%
Return on sales	15.8%	15.1%	
Return on assets	13.9	13.9	
Return on shareholders' equity	22.6	21.9	

"Both sales and net income now have increased every year since 1960."

Net Sales



Net Income

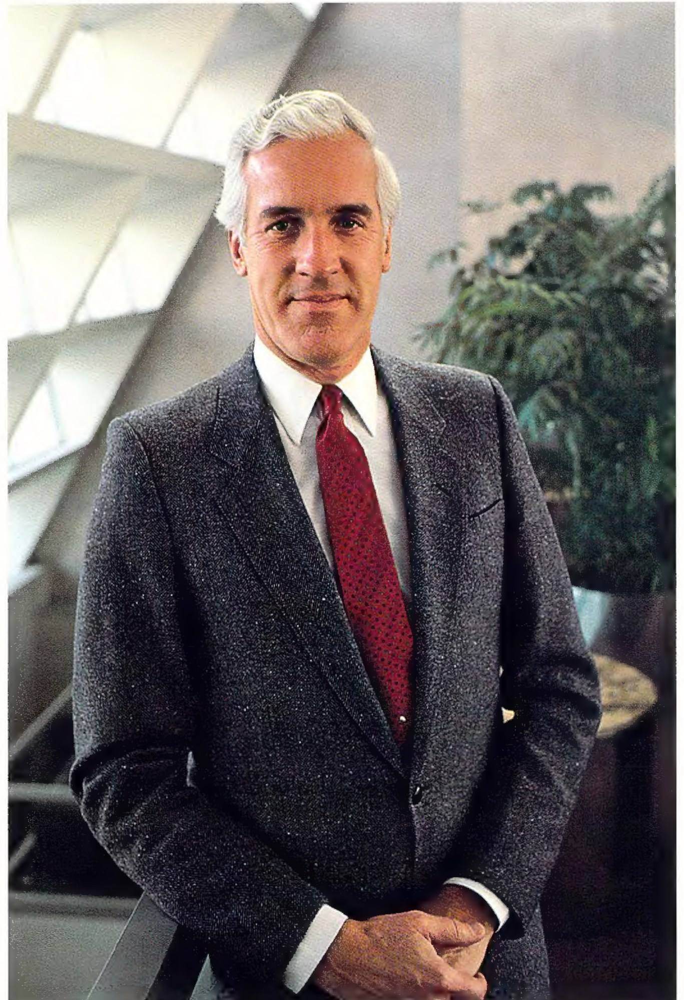


The company ended 1984 with all-time records in sales and net income. Both sales and net income now have increased every year since 1960. At year-end, our key financial ratios also were favorable, with the returns on sales and shareholders' equity continuing to improve and the return on assets remaining approximately the same.

As usual, the performance of our product lines varied. The sales of all product lines increased in the United States and on a worldwide basis. However, the continuing strength of the U.S. dollar again had a significant financial impact on our foreign operations. Unit sales in international markets generally were up; nevertheless, when translated into U.S. dollars, total sales revenues from abroad declined.

In addition to the currency problem in international areas, the company faced a difficult market for some of its products in U.S. hospitals for a variety of reasons. Cost-containment efforts by hospitals had a dramatic impact on health care expenditures. The number of patient-days in U.S. hospitals dropped significantly. Also, the company faced increased competition in injectable cephalosporin antibiotics, which resulted in lower sales for those products. It is most gratifying, nevertheless, to note that our total worldwide sales of oral antibiotics, insulin, medical instruments, herbicides, and Elizabeth Arden products enjoyed growth in 1984.

In a year during which our total sales growth can best be described as modest, considerable attention was devoted by management to holding the line on manufacturing costs and operating expenses. Manufacturing costs grew at a rate slightly less than sales, while operating expenses, excluding those in research and development, actually were less in 1984 than in the previous year. The result of those efforts was improved profitability.



Richard D. Wood, Chairman

A separate spending strategy was applied to research activities as we continued to expand those efforts in important ways. There are a number of reasons for the expansion. First, research is truly the lifeblood of a company such as ours. In future years, financial performance of the company will depend on the success of research efforts currently under way. Second, a number of excellent product candidates are now working their way through investigative stages, and increased resources are being applied to speed up this process. Our research group also has come forward with a number of interesting long-range leads that merit increased financial support. Highlighting this activity, a special section of this annual report focuses upon innovation and the interesting work under way by Lilly scientists on three specific projects in the pharmaceutical field. This section describes the work of Lilly scientists in developing monoclonal antibodies that may represent a major advance in cancer therapy; in exploring leukotrienes, which represent a totally new approach to the treatment of asthma and other serious allergic diseases; and in studying proinsulin, a naturally occurring protein from which insulin is made in the human body and that now can be made by recombinant DNA technology. It is possible that proinsulin may be used to treat diabetes more effectively in certain patients.

The company expects to market new products in all product lines during 1985. For example, we have several new pharmaceutical products presently awaiting government approvals for marketing. Also, we expect to file for other new product approvals during 1985.

In recent years the company has embarked on a program to complement its in-house research efforts by acquiring technology from outside sources. Our acquisition of technology has ranged from basic research knowledge to actual products and even to entire companies. The most recent example of the latter category was the acquisition of Advanced Cardiovascular Systems in May of last year. That organization markets a line of angioplasty balloon catheter systems used under certain circumstances to treat blocked arteries as an alternative to coronary artery by-pass surgery. Advanced Cardiovascular Systems is now a part of our Medical Instrument Systems Division.

Eli Lilly and Company has had an excellent record of sales, income, and dividend growth over the years. Looking ahead, the company once again enters a new year in a solid financial position. The company is operating in a changing and challenging environment, but one which presents new opportunities and new markets. The key to the future, in our view, is research—the kind of research that has spawned the innovation that has been the hallmark of our organization. Our shareholders, employees, and customers recognize that the company is a long-term business. In 1985 we will continue to invest heavily in research, confident that our research efforts will be as productive in the future as in the past.

The Lilly organization—with its outstanding people—has the ability to meet the challenges in our markets around the world and to continue the growth and financial health of the company in future years.

For the Board of Directors,

Richard D. Wood

Richard D. Wood, Chairman
February 7, 1985



Improving Health Through Innovation

One of the noblest endeavors of humankind, surely, is innovation: the creation of something new, something that has never before existed—in the arts, a fresco or a symphony that stirs the soul. In the pharmaceutical field, innovation means discovering and developing new medicines that can improve the health of the peoples of the world. Throughout much of our history, Eli Lilly and Company has been a pioneer in such pharmaceutical innovation.

In the 1920s, when Canadian scientists Banting and Best first discovered that insulin was the secret to the control of diabetes, it was Lilly that did the research necessary to scale up production methods to manufacture insulin in large enough quantities to save the lives of millions of diabetics.

In 1982, we made history again when we became the first company in the world to market a human-health-care product made by the exciting new technique of recombinant DNA, also called genetic engineering. The genes for human insulin were spliced into the genetic apparatus of bacteria and the bacteria then used to produce human insulin (sold under the trademark Humulin®). Humulin is still the only human pharmaceutical product on the market produced by recombinant DNA technology.

How does such groundbreaking innovation come about at Lilly?

This special feature section will demonstrate just how we pursue our quest—this process of discovering and developing new drug products—by tracing, in detail, the stories of three of the many compounds now in our pipeline. The research on these compounds is now pressing forward on three different, major frontiers of biotechnology. And all three compounds are promising drug candidates that, while still unproven, hold the potential of becoming important new weapons in the company's long war against disease.

The process of developing any new drug is an extraordinarily lengthy and expensive one. It takes, usually, seven to ten years from the time a scientist first has a good idea until the ensuing drug finally reaches the marketplace. And it costs, on the average, for each successful new drug, more than $100 million.

To foster this process, first of all the company seeks out the most talented and imaginative people we can find. We have now expanded our research and development staff to some 4,000 scientists and supporting staff, more than 14 percent of all Lilly employees.

We then commit money. Our research and development budget of $340 million for 1984—nearly a million dollars a day—represents a 16-percent increase over 1983, and a 91-percent increase over five years ago. "A very key point, philosophically, is that we don't link this commitment of dollars for research to a percentage of our sales or earnings," emphasizes Earl B. Herr, Jr., Ph.D., president of the Lilly Research Laboratories. "We determine our expenditures by the merits of our projects; if a project is worthy, we will allocate the money to develop it. This also means that our commitment to research is for more than one year. We realize that to pursue our research leads, we need a long-term commitment." The company also carefully targets this money into the areas of research where we have the greatest expertise and thus the greatest likelihood of success.

"We then allow our research people the scientific freedom to be creative," explains research director Michael J. Schmidt, Ph.D. "No one person, however, discovers a drug here. One person might discover an interesting chemical, but to get that interesting chemical from the test tube to the marketplace requires a whole team of people." Committees of scientists and scientific management evaluate experimental results at each stage and decide which drug candidates deserve expanded support. As a compound survives each round of testing and decision, more specialists—pharmacologists, toxicologists, development scientists, physicians—join the team. Outside experts from academia, including many from university medical centers, are also brought in to provide an external review of the compound's potential.

In this process, the attrition rate from "interesting chemical" to new drug product is tremendous. For every 10,000 chemicals that scientists scrutinize in their laboratories, only about 1,000 reach the next step of being studied in animals, and only ten of these achieve the stage of being tested in human beings. And only one out of the original 10,000 ever makes it onto the market as a new drug. John G. Whitney, Ph.D., vice president of Lilly Research Laboratories, emphasizes, "Ours is a high-risk business."

One particularly intriguing new drug idea now making its way over these many hurdles is one that stems from the burgeoning field of immunology.

Monoclonal antibodies: New approach against cancer

A recent advance in immunological research has yielded a major new tool—monoclonal antibodies—that company scientists are pursuing as a possible weapon in the conquest of cancer, the number-two killer in the United States.

Antibodies are one of our main defense systems against disease. When our bodies are invaded by bacteria, viruses, or other foreign substances, our immunological system fights back by manufacturing antibodies. These are large molecules that travel in our blood to the site of attack and physically lock onto the invaders, trying to neutralize them or weaken them so that other cells can destroy them. A hallmark of antibodies is that they are extremely specific. For every invading foreign substance—called an antigen—our bodies produce a different antibody; we are capable of making a virtually infinite number of different, specific antibodies.

It has been only recently, however, that scientists have learned how to tailor antibodies in the laboratory. In 1975, Cesar Milstein and Georges J. F. Köhler, in England, discovered a method of producing large quantities of any one of these nearly infinite, specific antibodies. The cells that make antibodies in the body, when grown in laboratory culture, do not survive more than a few days. Cancer cells, on the other hand, grow indefinitely. Milstein and Köhler's idea was to fuse antibody-making cells with cancer cells, thereby creating new, hybrid cells that both produce antibodies and survive indefinitely. Because the antibodies produced by one of these hybrid cells are all identical, they are called "monoclonal." These hybrid cells are, in effect, tiny antibody factories, capable of manufacturing any antibody anyone might want. And although these antibodies are made by a cell that is half cancer cell, the antibodies themselves are the same as those produced by the body and have no cancer-causing ability.

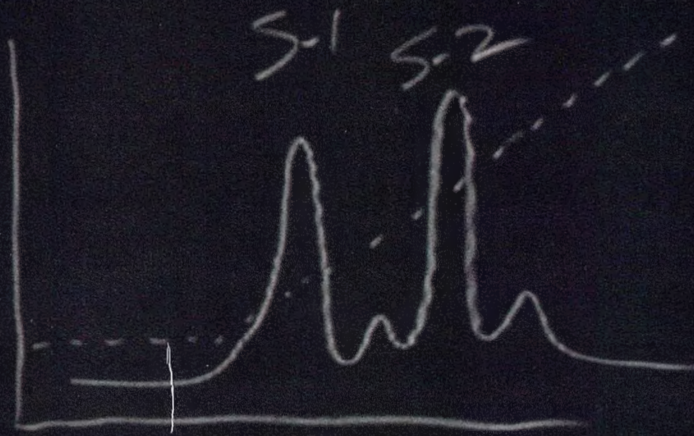
Monoclonal antibodies turned out to be extraordinarily useful. They are now becoming widely used in medical research and also for diagnosing many diseases, such as hepatitis, herpes, gonorrhea, and streptococcal infections. In some cases, tests that used to require days now take only minutes. For this achievement, Milstein and Köhler won the Nobel Prize in medicine in 1984.

For the past several years, Lilly scientists have been exploring the use of these monoclonal antibodies in cancer therapy. "What intrigues us," explains Irving S. Johnson, Ph.D., vice president, Lilly Research Laboratories, "is the possibility of using these antibodies to deliver anticancer drugs." At present, all of these drugs produce serious side effects, because they kill normal cells



Scientists at Lilly Research Laboratories are investigating the new tool of monoclonal antibodies as a way of delivering anticancer drugs directly to tumors. Developing such novel ideas into drugs requires the efforts of teams of specialists. Above, Pamela E. DeRiso carries a flask of nutrient medium used for growing the antibody-producing cells. At right, other team members—from left, immunologists Thomas F. Bumol, Ph.D., and Jon R. Schmidtke, Ph.D., and division director Rodney C. Nickander, Ph.D.—confer about the progress of the experiments.

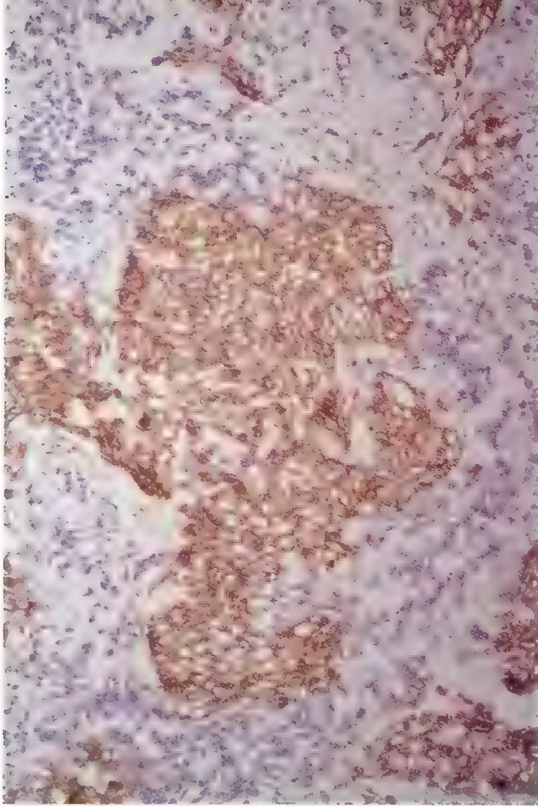
Photograph on page four—
At Lilly Research Laboratories, in Indianapolis, Lynn E. Rinkema studies the action of pharmacologic agents on smooth muscle.


S-1
S-2
MOAB FRACTIONATION
CORRELATED ELISA RXTY
S-1 ISOTYPE IgG
S-2 ISOTYPE IgG
S-2 "SHOULDERS"


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PAGE


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Sophisticated devices permit our scientists to probe an otherwise invisible world. At left, Philip Marder prepares a sample for a laser cell counter, which measures the binding of monoclonal antibodies to cells. Above, a microscope view of lung tissue reveals that monoclonal antibodies have selectively sought out the cancer cells (shown in brown) without affecting or harming the nearby normal cells (shown in purple).

in the body as well as tumor cells. Many tumor cells, however, carry certain antigens that are rare on normal cells. The idea is to develop antibodies that react with these tumor antigens and to attach anticancer drugs to the antibodies. The antibodies then would carry the drug directly to its target, the tumor, while sparing normal cells. This would "increase the specificity of the antitumor drugs," points out Dr. Johnson, "and could make cancer chemotherapy both safer and more effective."

Company scientists, working with immunologists at the Scripps Clinic and Research Foundation, have now identified a monoclonal antibody—which they call KS1/4—that recognizes and reacts with an antigen common to several important human carcinomas: lung, breast, prostate, and pancreas. Together, these four carcinomas kill more than 200,000 people each year in the United States alone, causing more than 45 percent of all deaths due to cancer. Lung carcinoma (the most common form of lung cancer) alone kills more than 120,000 a year.

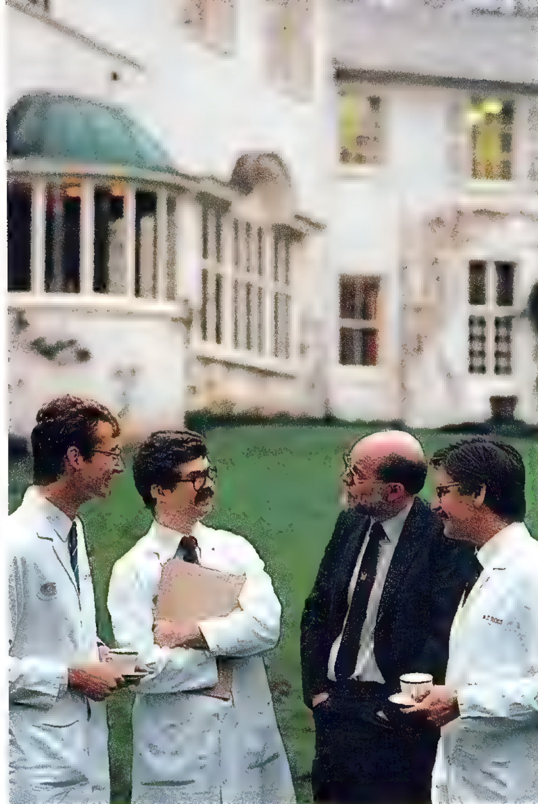
One of the tricky technical problems, explains Dr. Johnson, is attaching the molecules of drug to the monoclonal antibody. "The antibody is a relatively large molecule, and one wants to put as many drug molecules on it as possible. If you think of the antibody as a guided missile and the drug molecules as warheads, the more warheads you can get on, the better." Some scientists are talking about bonding fifty, even a hundred, drug molecules onto a single antibody molecule. However, they do not want to load on so much drug that it interferes with the portion of the antibody molecule that reacts with the antigen on the cancer cell. Company researchers have now succeeded in attaching multiple molecules of vinblastine, a Lilly cancer drug, to KS1/4, while "maintaining the biological activity of both the antibody and the drug.

"We have also shown," continues Dr. Johnson, "that we can, in fact, suppress human lung cancer, transplanted into mice, with this vinblastine-KS1/4 combination." The monoclonal antibodies selectively deliver the vinblastine to the tumor, and the drug slows the growth of the tumor. "Furthermore, we can give these mice a dose of vinblastine that would be lethal if we gave it as a free drug (that is, not combined with the antibody)—and the animals survive."

The next technical hurdle is developing a method for producing the monoclonal antibodies in quantities large enough for testing (and, ultimately, using therapeutically) the vinblastine-KS1/4 combination in humans. "While there are a wide number of such cell-culture technologies available," says Dr. Johnson, "none of them

have yet been advanced to this sort of large-scale production. However, the technology will involve growing quantities of mammalian cells, which is not unlike growing bacteria as we do in making human insulin via recombinant DNA. Our wealth of experience in large-scale fermentation technology should stand us in good stead."

If KS1/4 does indeed improve drug delivery against these four major cancers, it would be an important step forward in the treatment of this deadly and feared disease.



Lilly scientists on both sides of the Atlantic collaborated on developing a new drug candidate to block leukotrienes, believed important in causing asthma. In the photograph above, scientists at our Erl Wood Research Centre, near London, continue to search for still other leukotriene-antagonists. They are, from left, chemist S. Richard Baker, Ph.D., pharmacologist John R. Boot, Ph.D., director of research William Dawson, Ph.D., and chemist William J. Ross, Ph.D. On the facing page, pharmacologist Jerome H. Fleisch, Ph.D., at Lilly Research Laboratories in Indianapolis, is involved in testing substances for their leukotriene-antagonist activity.

Leukotrienes: Possible key to treating asthma

Many millions of people suffer from the mysterious affliction of asthma. Whenever they encounter one of the things to which they are allergic—whether it be house dust, cat dander, or pollen—it triggers a dramatic reaction. They cough and wheeze. Their airways become plugged with thick mucus, and the muscles of their bronchial tubes begin to constrict, shutting off the flow of air to their lungs. In very severe cases, such attacks can require emergency treatment in a hospital. Despite such measures, asthma still kills thousands of people each year in the United States alone. Finding the key to asthma could prevent much human suffering.

In attempting to unravel the causes of asthma, scientists have long been investigating the cascade of immunological responses within the body that give rise to these alarming symptoms. Researchers now realize that certain cells in the lungs release powerful substances called mediators. These mediators are messenger molecules, which travel to other body tissues and trigger them to produce allergic responses. For many decades, it has been known that a mediator called histamine is involved in asthma and other allergies. "Yet antihistamine drugs do not seem to do very much for people with asthma," points out Lilly research consultant Winston S. Marshall, Ph.D. "Whatever histamine is doing, it isn't enough to account for all the symptoms of bronchial asthma. There has to be something else causing some of the symptoms."

In their search, investigators in the late 1930s discovered a mysterious substance they called SRSA, for Slow Reacting Substance of Anaphylaxis, because in laboratory studies SRSA causes muscle tissue to contract very slowly. In England, Walter Brocklehurst, later a Lilly scientist, showed that the antihistamines do not stop the airway constriction of asthma and proposed that SRSA might be the cause. Yet SRSA remained elusive. "It is very active in small amounts," explains Dr. Marshall, "and also very, very unstable. For a long time, no one was able to





get enough of it to figure out its chemical structure."

Since the mid-1970s company researchers have been following this important lead, trying to elucidate the structure of SRSA and also seeking drugs that would inhibit its action. "One of the breakthroughs," Dr. Marshall explains, "came when it was discovered that SRSA was derived from a body chemical called arachidonic acid." In 1979 and 1980, Swedish chemist Bengt Samuelsson and others finally worked out the chemical nature of SRSA. It turned out that SRSA is part of a family of mediators (messenger molecules), which Samuelsson named the "leukotrienes." For this accomplishment, Samuelsson shared the Nobel Prize for medicine in 1982. "It is now generally believed," says Dr. Johnson, "that the primary mediators in asthma are two of these leukotrienes and that histamine is a secondary mediator."



Asthma attacks can be so severe that they require emergency treatment in a hospital. At left, a nurse cares for a young girl, giving her oxygen while monitoring the sounds of her heart and lungs with a stethoscope. Above, a respiratory therapist prepares to measure lung capacity, which can be sharply reduced by asthma.

Once the SRSA mystery was solved, Lilly's search for anti-SRSA compounds was stepped up. A close collaboration began between scientists at the Indianapolis laboratories and the company's Erl Wood Research Centre, in England. Erl Wood chemists set about synthesizing the leukotriene molecules, while on both sides of the Atlantic, other researchers designed and made other molecules to block the actions of these leukotrienes.

"The very bedrock of research here," says Dr. Marshall, who is an organic chemist, "is the working scientist, usually more than one, who has an idea and explores it in some detail. Often it is a team of a chemist and a biologist, the chemist making the new compounds and the biologist testing them. Both in Indianapolis and at Erl Wood, we were doing this. One takes a molecule that has some activity and one systematically redesigns it; if it has a chain with one carbon atom, one adds another carbon, then three, four, five. In some cases we went up to twelve carbons, one at a time, looking at each one of those compounds for its biological activity. We screened several hundred possible substances this way."

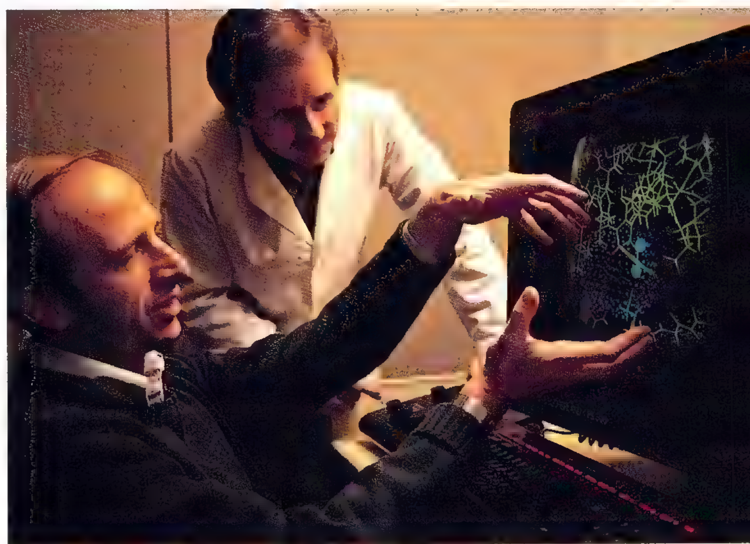
Through this arduous process, the company has developed a "very exciting," in Dr. Marshall's words, compound. "It has very desirable properties. First of all, it specifically blocks some of the most potent of the leukotrienes. It is what we call an antagonist. Many of our tissues have receptor molecules that react with the various leukotrienes; this compound binds to these receptors, blocking the action of the leukotrienes. And not least among its attributes, the compound is very effective, in laboratory animals, when taken by mouth.

"Such a leukotriene antagonist could be an important drug," emphasizes Dr. Marshall, "because asthma is a very big problem, and the currently available antiasthmatic drugs all have serious side effects. So there could be a

significant market for drugs against asthma without these side effects." In time, some asthmatics might take leukotriene antagonists regularly to prevent attacks; others might take them at the onset of, or during, attacks to reduce symptoms.

After extensive studies in laboratory animals, this leukotriene antagonist has now reached the stage of early studies in humans. As with any drug candidate, it is first being administered to healthy volunteers under carefully controlled conditions to find out whether it is safe and how it works in the body. Testing could move on to the next step of studies in asthmatics themselves sometime during 1985.

Company scientists are also continuing to search for other compounds to block still other members of the leukotriene family. "These leukotriene antagonists are a whole new class of compounds," emphasizes Dr. Marshall, "which we think is going to be terribly important in other diseases as well." And if the leukotrienes do prove to be the key that unlatches the mysteries of asthma, Lilly's new leukotriene antagonist compound could significantly enhance the quality of life for many people.



Sophisticated equipment permits Lilly scientists to probe the secrets of molecules themselves. On a computer screen at Lilly Research Laboratories, in Indianapolis, chemists David K. Herron, Ph.D. (seated), and D. Mark Gapinski, Ph.D., manipulate a model of a complex leukotriene-receptor molecule. In the close-up at right, the computer shows that the drug candidate, in red, fits into the receptor molecule like a key into a lock—thus blocking the receptor site. Such computer modeling allows scientists today to custom-tailor new drug molecules.

Proinsulin: Improving the lives of diabetics

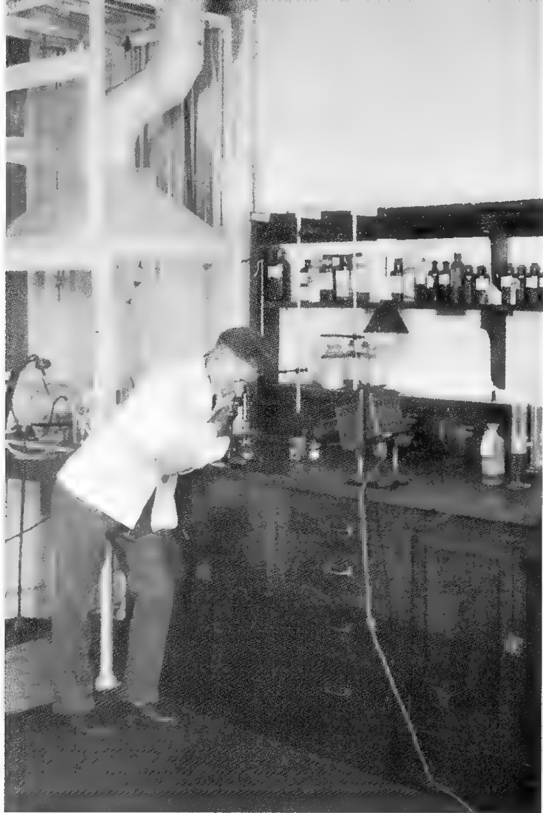
Up until the time of Banting and Best, only sixty-odd years ago, a diagnosis of diabetes was a certain death sentence. Diabetics rarely survived more than a few years after their disease first manifested itself. Today, however, thanks to insulin, most diabetics can lead relatively normal lives. Yet the disease is far from conquered. "Diabetics have many problems other people don't have," points out Dr. Johnson. They sometimes have vascular problems and skin ulcers, they are more likely to develop kidney disease and lose their eyesight, and their life expectancy is shorter. Diabetologists believe that these dire complications may develop because taking insulin as a drug cannot provide the same minute-to-minute control of the level of sugar in a diabetic person's blood that a nondiabetic person's body provides.

Lilly researchers are now investigating whether taking a newly available substance called proinsulin may help diabetics better control their blood sugar.

We started this research in the late 1960s, shortly after biochemist Donald F. Steiner, M.D., and others at the University of Chicago discovered the existence of proinsulin. Proinsulin is the precursor of insulin in our bodies; the cells in our pancreas glands that produce insulin first make proinsulin and then convert it into the


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Lilly is studying proinsulin, a natural body substance, as a possible new therapy for diabetes. In such work, Lilly scientists routinely consult with outside, academic experts. On opposite page, Lilly biochemist Bruce H. Frank, Ph.D. (left), discusses proinsulin research with Jerrold Olefsky, M.D., professor of medicine at the University of California at San Diego. The company has been a leader in diabetes research ever since the early days of insulin; in the 1920s, Jasper P. Scott, shown above, was a member of the original team of Lilly chemists that developed the methods for the first large-scale, commercial production of insulin.

smaller insulin molecule. It also turned out that we all (if we are not diabetics) have proinsulin circulating in our blood all of the time. This finding raised several questions. What does this circulating proinsulin do in our bodies? "It must be there for a reason," says Dr. Johnson. "Does it have a physiological action of its own?" Could proinsulin be helping to control blood sugar levels in normal people?

For a long time, these questions could not be adequately investigated, because there was no way to get enough human proinsulin for study. Then in 1981, Lilly began making proinsulin via recombinant DNA technology, and sufficient human proinsulin became available for the first time to conduct clinical trials. And we have now organized a sizeable group of researchers, both within the company and outside, to find out whether human proinsulin has a role in improving the care of diabetics.

"With our historical position in diabetes, and the patients we serve, it is clear we have to aggressively go out and look at proinsulin," points out Dr. Whitney. "If it is potentially better, then we have an obligation to bring it forward. We owe this to society and humanity."

These investigations of proinsulin have now reached the stage of studies in humans. Studies on healthy volunteers were conducted at the Lilly Clinic by diabetologists Daniel W. Howey, M.D., and John A. Galloway, M.D. The company also funded related research by groups at the University of Chicago and the University of California at San Diego. In this work, "we have learned several interesting things," explains John H. Marsden, M.D., vice president of the Lilly Laboratory for Clinical Research. "We have evidence that human proinsulin does, in fact, have a pharmacological action in its own right. And we have found out three things about this action.

"First of all, human proinsulin does lower the level of sugar in the blood, but it does not have as much ability to do so as insulin. Secondly, proinsulin has a longer half-life than insulin. It stays around in the blood much longer. But the most interesting thing is the effect proinsulin has on the liver. There is a fairly large pool of sugar in our livers, in the form of glycogen. It appears that the action of proinsulin may be to reduce the release of this sugar into the blood, helping to keep blood sugar levels down."

The next question is whether these attributes of human proinsulin can indeed help people with diabetes. To find out, the investigators are now administering the drug candidate to diabetics themselves. "We are just now starting up these studies at a number of university medical centers," says Dr. Marsden, "to determine whether we can maintain diabetics from day to day. We are asking if we can improve the control of their diabetes with proinsulin, with and without insulin. We may have some

answers to these questions during this year."

"If our preliminary observations hold true in expanded studies," notes Dr. Johnson, "it is quite possible that, down the road, one will be treating some diabetics with a mixture of insulin and proinsulin, or proinsulin alone." And the hope is that such use of human proinsulin may help reduce the serious complications of the disease and improve the lives of diabetics.

Proinsulin, however, has already proven useful in a different role—as a means of manufacturing human insulin.

A better way to make insulin

Another major problem concerning diabetes, until very recently, was the supply of insulin. As diabetics live longer, their numbers are increasing. There are now more than seven million diabetics in the United States and countless more worldwide. Insulin, however, from the time of Banting and Best, has been a by-product of the meat industry; the drug is extracted from the pancreas glands of cattle and swine. The insulin supply thus has varied not with the growing needs of diabetics but with the world's consumption of meat.

This potential problem was solved in the late 1970s when Lilly, working with Genentech, Inc., and the City of Hope National Medical Center, developed a method for producing Humulin, human insulin manufactured by recombinant DNA. Diabetics are now assured of limitless supplies of human insulin.

There are, however, two different routes by which one can use bacteria and recombinant DNA technology to manufacture human insulin. The insulin molecule is a protein consisting of two amino-acid chains, called the A and B chains. One route is to create two different strains of bacteria: the gene that codes for the production of the A chain is inserted into one group of *E. coli* (the bacteria commonly used in genetic engineering), while the gene for the B chain is inserted into a second group. The two strains are grown, separately, in a process called fermentation. One strain produces the A chain and the other, the B chain. Each chain is isolated and purified, and the two chains combined chemically to form the complete insulin molecule.

The other route is the way the body produces it—by first making proinsulin, which consists of a single, longer chain that coils back on itself. This proinsulin chain, as it happens, includes both the A and B chains of insulin, connected by a third section called the C chain. To convert proinsulin into insulin, the body removes the C chain.

In the late 1970s, when the company was first gearing up to make human insulin via recombinant DNA, we



Lilly's Humulin, produced by recombinant DNA technology, now assures the world's diabetics of an unlimited supply of human insulin. Above, Denise L. Grimes holds a flask containing the quantity of human insulin required to sustain one hundred diabetics for a full year. At right, a newly diagnosed patient is being treated with human proinsulin—rather than insulin—as part of this research. Here she discusses her progress with diabetologist Richard M. Bergenstal, M.D. (right), who is on staff at the International Diabetes Center, in Minneapolis.


MEDICAL CENTER





Proinsulin has already proved itself an efficient route for manufacturing human insulin via recombinant DNA. Here, in the chillroom of our production plant, proinsulin will undergo one of its many purification steps in these 1,000-liter gel filtration columns. At left, Richard Smith checks a pressure gauge on one of the columns; and, above, Rosa Kirkwood measures the flow of fluid through the system. The company plans to convert this plant to the new proinsulin process in the very near future.

decided on the A chain-B chain route, because, at the time, the technology for this process was further advanced. "Going with this two-chain route meant getting a product on the market earlier," explains David W. Dennen, Ph.D., vice president of Lilly's Biochemical Development Division, "and we would also be ahead in training our production people." Even then, however, we realized that the proinsulin route offered possible advantages and were already researching this alternate process. "We all thought that the proinsulin route would probably be the better way to do it.

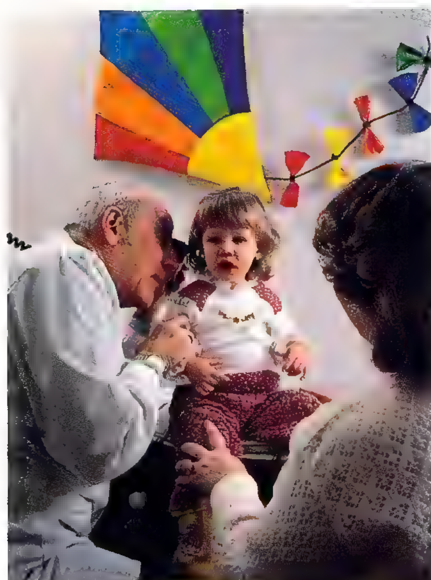
"In practice, however, there were a lot of intricacies that had to be worked out," continues Dr. Dennen. "The proinsulin route is a bit trickier, and we had to develop some different techniques." Over the past six years, our scientists and engineers have developed the process for this proinsulin route. Only a single strain of *E. coli* is used; the gene that codes for the production of proinsulin is inserted into its genetic apparatus. The *E. coli* is grown in a fermentation process and produces quantities of proinsulin. This is isolated, purified, and the connecting C chain removed chemically to make human insulin.

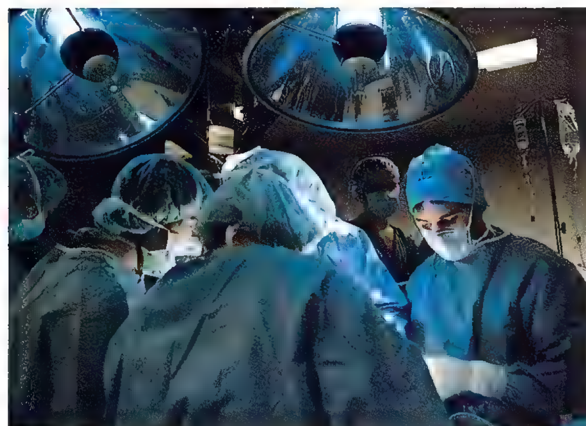
This proinsulin process does indeed, we have found, realize its theoretical advantages. "It is far more efficient to make insulin this way," says Dr. Dennen. It is a simpler process, with many fewer steps, because it uses a single fermentation instead of two. And after the fermentation, instead of separately isolating and purifying the A and B chains, only proinsulin must be isolated. "We will dramatically increase our capacity; we will get twice as much through per unit time." Lilly is now poised to switch over to this new process for full-scale manufacturing.

In this feature section, we have now looked closely at research under way on three of our "interesting chemicals"—monoclonal antibodies, leukotriene antagonists, and proinsulin. While these drug candidates are aimed against vastly diverse diseases, their stories all reveal the essence of innovation at Lilly. Our community of talented scientists pursue their quest, identifying needs in major disease areas, following leads, testing thousands of ideas to find or create those few substances that will make it onto the marketplace as new medicines.

These technologies—particularly those involved in producing monoclonal antibodies and in genetic engineering—also have further applications, for the future, against other major human maladies. As our globe spins on into the late 1980s and beyond, the special type of innovation fostered at Eli Lilly and Company will, we hope, bring untold new benefits to countless millions of the world's population.

Human Health





Pharmaceuticals

A broad product line backed by a solid marketing effort led to record worldwide sales of pharmaceuticals in 1984, notwithstanding a challenging business environment. Sales reached $1.664 billion, a 1-percent increase over 1983. In the U.S., the sales growth was achieved in the face of cost-reduction efforts by hospitals and increased competition in the hospital market. In international markets, the unit volume of sales increased in 1984; however, sales dollars declined from the 1983 level as the result of price controls in certain markets and adverse currency comparisons that reduced foreign sales. Conversion of international sales to U.S. currency reduced worldwide pharmaceutical sales by 2 percent, or $28 million.

Record sales were achieved in all major product groups, with the exception of injectable antibiotics. In 1984 the company had six products that each achieved worldwide sales of more than $100 million. Reflecting the increasing success of Humulin, Lilly's human insulin produced through recombinant DNA technology, worldwide sales of insulin products exceeded $200 million for the first time.

Leading the growth, oral antibiotic sales increased 5 percent in 1984, with the largest gains in the United States. Foreign sales were adversely affected by the strong dollar and price controls. Ceclor,® a very effective cephalosporin, once again led the oral antibiotic sales growth. Ceclor sales continued to grow at a much faster rate than the oral antibiotic markets in the U.S. and abroad. Sales of Ceclor outside the U.S. exceeded $100 million for the first time. In the U.S., sales of another very effective oral cephalosporin, Keflex,® continued to grow, but sales outside the U.S. declined. Keflex remains the largest selling oral antibiotic in the United States.

Worldwide sales of injectable antibiotics declined in 1984. Sales in the U.S. were affected by increased competition and changes in the Medicare program that caused hospitals to place increased emphasis on reducing drug expenditures. The company's broad line of injectable antibiotics and a marketing program that emphasizes cost-effectiveness and rational antibiotic use has helped in this difficult environment, and certain products performed well. Kefzol,® a versatile cephalosporin, recorded good sales growth, although sales of Mandol® and Moxam® declined. Also, Vancocin,® an antibiotic that is effective in the treatment of staphylococcal infections resistant to all

In October, 1984, the company dedicated Lilly Corporate Center, in Indianapolis, as the site of its worldwide headquarters and central research facilities.



other antibiotic therapy, had outstanding growth. Because of its effectiveness against pseudomonas and its exceptional safety, Nebcin® remained the leading aminoglycoside antibiotic in the U.S. despite a decline in sales. Outside the U.S., the unit volume of injectable antibiotics increased over the 1983 level, but sales dollars declined due to adverse currency comparisons and price controls. Mandol, Kefzol, and Vancocin all performed very well in international markets.

Worldwide sales of pharmaceuticals other than antibiotics reached $686 million in 1984, an 8-percent increase over the previous year. All major product groups—insulin, cardiovascular products, analgesics, and anticancer products—contributed to the sales growth.

Humulin, reflecting the positive reception by physicians worldwide, continued to outperform its competition and achieved steady growth. Recent data indicated that, in the U.S., almost one-half of all newly diagnosed diabetics who require insulin for treatment of their condition were being prescribed Humulin. In addition, many insulin-dependent diabetics who experienced problems with animal-source insulin are now being treated with Humulin. The product is now marketed in twelve countries, having been introduced in 1984 in Finland, France, Austria, Belgium, Switzerland, and South Africa. Additional introductions are planned for 1985. Humulin continues to enhance the company's sixty-year tradition of leadership in the development, production, and marketing of diabetic care products.

Dobutrex,® a medicine used to increase cardiac output, continued to show solid sales gains in all major markets and remains the leading product of its kind in Germany and France. Darvon® products also showed solid growth, reflecting physicians' increasing use of analgesics with proven records of relative safety and therapeutic success. Worldwide sales of the company's anticancer agents—Oncovin,® Velban,® and Eldisine®—continued to grow.

Productive research is fundamental to the continued success of our company. In recent years, the company has significantly increased its investment in pharmaceutical research. The increased commitment has been channeled to a carefully structured program that has encouraged innovation to yield new therapies in those areas where our company traditionally has made major research efforts, such as infectious diseases, diabetes, cancer, cardiovascular disorders, and central nervous system diseases. The company is placing greater emphasis on the discovery of treatments for chronic disease states while continuing the emphasis on the treatment of acute diseases.

Our scientists are now evaluating more than thirty-five compounds, many for more than one disease state, as potential therapies for cancer, cardiovascular diseases, asthma, depression, infectious diseases, endocrine disorders, and obesity. While not all will emerge from the rigorous process of drug evaluation to become marketed products, some certainly will. Those that do not, however, contribute information to our program, adding to the base of knowledge from which other drug candidates will be developed.

Our company will continue to complement its own in-house research efforts through the acquisition of specific technologies from outside sources. The acquisitions will be made through licensing agreements, venture-capital investments in emerging medical technologies, and the placement of research contracts with outside institutions.

Cardiovascular diseases affect people of all ages and continue to be one of the leading causes of death in the world. Our research focuses on the discovery and development of therapies to treat a variety of chronic cardiovascular disease states, thereby increasing life expectancy and the quality of life. Of the compounds being clinically tested, two combat high blood pressure. Pinacidil lowers blood pressure by relaxing the peripheral blood vessels. The drug has a different chemical structure and may also have milder side effects than those of existing vasodilators. Penbutolol is a beta-blocker that needs to be taken only once a day; most antihypertensive agents must be taken two or three times a day.

Indecainide is being evaluated for control of faulty rhythms in the lower chambers of the heart. Lower-chamber arrhythmias are responsible for a high percentage of cardiovascular deaths. Indecainide may be given either orally or intravenously. Preliminary results of clinical trials indicate that indecainide is quite effective, compared with existing antiarrhythmia drugs.

Several other compounds showing potential for use in congestive heart failure, angina, and hypertension are in earlier stages of investigation. These include compounds that have demonstrated inotropic and calcium-channel-blocker activity in laboratory studies.



To maintain its leadership position, the company remains heavily committed to research to combat infectious diseases. One of the new injectable anti-infective agents under evaluation has a chemical structure different from that of any antibiotic presently used in clinical medicine. Known as a peptolide antibiotic, it has demonstrated effectiveness in early laboratory studies against microorganisms that cause life-threatening infections in humans.

Company scientists are also evaluating ceftazidime, an injectable cephalosporin antibiotic that the company hopes to market in the U.S. during 1985. Ceftazidime has excellent activity against the most serious gram-negative infections. The product will complement the company's existing line of cephalosporin antibiotics.

Several potential oral cephalosporin antibiotics are in much earlier phases of investigation.

Research on the central nervous system is being concentrated on several new compounds for the treatment of chronic disorders. The discovery of new antidepressant medicines has the potential of helping millions of people lead more-normal lives. One out of three patients requiring antidepressant agents is not helped by existing products. Also, many available products have undesirable side effects. Fluoxetine is an effective antidepressant that is highly selective in its action on neurotransmitters in the central nervous system. This selectivity of action results in a favorable side-effect profile relative to most currently marketed antidepressants. Based on early studies, fluoxetine has also shown promise in treating obesity.

Tomoxetine is another potential antidepressant in an earlier stage of evaluation. It is also highly selective, but has a different mode of action than fluoxetine and thus could prove effective for a different subgroup of depressed patients.



Pergolide counteracts the poor motor control and other symptoms associated with Parkinson's disease. Clinical studies have shown it to give effective relief of disease symptoms.

Research is also focusing in the areas of analgesia and antipsychotic therapy.

Cancer research at the company is focusing on several unique potential treatments. Monoclonal antibodies could represent a major advance in cancer therapy. The antibodies are proteins designed to bind exclusively to a particular cell type, such as a cancer cell. Once in place, the antibody attacks the host cell.

Our scientists have recently attached anticancer drugs to such antibodies. The combined action of the antibody and drug may destroy the host cancer cell more effectively than the drug or antibody alone. Also in a very early stage of investigation is a compound that in laboratory studies potentiated the activity of certain antineoplastic agents.

Company scientists are working with a range of compounds for gastrointestinal problems. A promising new substance to treat peptic ulcers, nizatidine, decreases the production of stomach acid and thus allows ulcers to heal. In early studies, it has been highly effective with few side effects. The company is currently evaluating its efficacy in once-a-day dosing.

Our company is an industry leader in biotechnology. Humulin continues to be the only pharmaceutical product on the market made through recombinant DNA technology. Company scientists continue to work on the development of a variety of new formulations of Humulin to meet the specific needs of different patient types. A second sustained-acting Humulin formulation is expected to be introduced in the U.S. in 1985. Recombinant DNA research has also led to significant productivity improvements in the manufacture of Humulin.

Proinsulin is the naturally occurring protein from which insulin is made in the human body. However, the protein had never been available in sufficient quantity to permit evaluation of its role in the body beyond that of a precursor of insulin. Through recombinant DNA technology, the company has been able to manufacture proinsulin, thus allowing investigation of its physiological properties. Though testing is just beginning, early clinical results suggest that proinsulin may be of benefit in the treatment of diabetes.

Recombinant DNA research has also led to the production of human growth hormone in sufficient quantities so that evaluation may begin to assess its effectiveness in the treatment of dwarfism and osteoporosis and in accelerating the healing of wounds and burns.

Increased emphasis has been given to the discovery of treatments for chronic respiratory diseases such as asthma. In particular, our scientists are studying the role of a class of naturally occurring substances, the leukotrienes, which appear to be primary mediators in hypersensitivity reactions. Interrupting the cascade of reactions that occur in an allergic reaction by blocking the leukotrienes is a totally new approach to the treatment of asthma. The first leukotriene antagonist is in the early stages of clinical evaluation.

To support the growing research program, the company expanded its research facilities in 1984. Late in the year, the new Biomedical Research Building was opened in Indianapolis. The 300,000-square-foot facility is devoted largely to investigations in the fields of immunology, cell biology, and recombinant DNA technology. The company also enhanced its product development capacity. In July, a 27,000-square-foot pilot plant was completed for the development of recombinant DNA manufacturing procedures for various protein compounds. Construction also began on a $50 million, 170,000-square-foot building for developing chemical manufacturing processes for new products and newly discovered chemical compounds under evaluation as potential products, as well as more-efficient manufacturing processes for marketed products.

Medical Instruments

Since 1977, when the company entered the field of medical instrumentation with the purchase of IVAC Corporation, the medical instrument subsidiaries have been the fastest growing component of our company. The Medical Instrument Systems Division comprises four subsidiaries: IVAC Corporation, Physio-Control Corporation, Cardiac Pacemakers, Inc., and Advanced Cardiovascular Systems, Inc., which was acquired this past May. The division's primary focus is on the development and sale of fluid/drug-delivery systems and cardiovascular devices. In addition to enhancing the quality of care for patients, the division's products offer the hospitals cost-saving advantages. This is of particular importance with hospitals implementing programs to control expenses.

The MIS division sales topped the $300 million mark for the first time in 1984, reaching $309 million. IVAC was the primary contributor to the sales growth, and ACS has also performed exceptionally well since its acquisition. CPI sales declined slightly, as sales of cardiac pacemakers in the U.S. continued to decline in 1984. Physio-Control sales also declined slightly from the previous year, due primarily to a slowdown by hospitals in the replacement of defibrillators.

IVAC Corporation, which markets systems for fluid/drug delivery and vital-signs measurement, was the MIS new-product leader in 1984. The subsidiary introduced an





accessory instrument that provides twenty-four-hour automated intermittent delivery of medications; a portable vital-signs monitor that gives simultaneous measurement of blood pressure, pulse, and temperature; and more than forty new administration sets for use with various fluid/drug-delivery systems.

A new IVAC division that was formed to market more effectively the company's line of vital-signs monitors was substantially expanded in 1984. IVAC also began to market medical instrumentation in the expanding home-health-care market.

Early in 1985, Physio-Control expanded its product line with the introduction of four new products. Lifepak® 8 is a comprehensive cardiac-care system that includes a defibrillator, a monitor, and an external pacemaker to help maintain a normal heartbeat. The VSM® 2 patient monitor for the hospital measures blood pressure, temperature, and heart rate and can provide an electrocardiogram. The Lifestat® 200 is a portable monitor to measure blood pressure designed for use throughout the hospital; the Lifestat 100 is a portable unit designed not only for use in the hospital but also during transport to hospitals.

CPI's new Delta™ pacemaker performed extremely well during the year in expanded clinical trials. Delta paces both chambers of the heart and can alter the heartbeat to meet the changing needs of the patient. The product also has a unique feature, rate smoothing, that prevents precipitous increases or decreases in the heart rate, thereby making patients more comfortable. CPI expects worldwide market release of the Delta in 1985.

CPI will soon market the Astra™ family of pacemakers. Astra pacemakers have sophisticated telemetry that allows the physician to respond more promptly to changing conditions of a patient. The products pace one chamber of the heart, the approach used with approximately 75 percent of all pacemakers.

In addition to the development and marketing of pacemakers that correct a slow, weakened heart rate, CPI continues to explore, both in its own laboratories and elsewhere, for device technology to control sudden increases in heart rate that can lead to heart attack and death.

The Betatron® line of programmable ambulatory insulin pumps, also marketed by CPI, recorded good sales growth in 1984. The Betatron pumps are available in more than twenty countries.

The acquisition of Advanced Cardiovascular Systems broadens the company's role in cardiovascular therapy. The new subsidiary designs, manufactures, and markets dilatation catheter systems used to open arteries around the heart narrowed by atherosclerosis. For many patients, the catheter systems provide a highly effective and cost-efficient alternative to coronary artery by-pass surgery. By-pass surgery is a traumatic procedure, and patients normally require four to six weeks of recuperation. Treatment with the ACS catheter system (a procedure known as coronary angioplasty) is usually performed under local anesthesia and generally requires a week or less for recuperation.

The primary focus of ACS will continue to be the development and marketing of new products for the rapidly growing coronary angioplasty field. In addition, in 1985, ACS expects to introduce dilatation catheters for opening narrowed arteries in other parts of the body. The products should be especially useful in arteries of the legs and kidneys.

The MIS division will increase its research and development efforts in 1985, with continued emphasis on fluid/drug-delivery systems, products for the treatment of cardiovascular disorders, and products to monitor cardiovascular functions. To complement the research and development efforts of the four individual medical instrument subsidiaries, a medical instruments research group was formed this past year. This group of scientists will study ways to combine drugs and medical devices in the treatment of diseases. An early priority will be the development of biosensors capable of measuring physiological parameters or levels of various substances in the blood. Effective biosensors would allow medical instruments to deliver drugs according to the moment-by-moment needs of the patient.

The division will seek to diversify its product lines and complement its internal research through acquisitions, joint ventures, licensing agreements, product and technology purchases, and venture capital investments.

Agriculture

Worldwide sales of agricultural products increased in 1984 in spite of increased competition, a stagnant farm economy throughout the world, and adverse currency comparisons that reduced foreign sales. Sales reached $757 million, an increase of 4 percent over 1983. The growth was achieved primarily through sales of agricultural chemicals in the United States. While the unit volume of agricultural chemicals increased in international markets in 1984, dollar sales were reduced by the strength of the U.S. dollar. Worldwide sales of animal products declined. The effect of the adverse currency comparisons on worldwide sales of agricultural products was a reduction of 2 percent, or $19 million, when converted to U.S. dollars.

Sales of the herbicides Treflan® and Sonalan® in the U.S. accounted for most of the 12-percent growth in agricultural chemicals in 1984. Treflan, used primarily for soybeans, cotton, and cereal grains, performed very well. Sales of Sonalan, launched in January, 1984, were exceptional. This new herbicide is approved not only for soybeans but also dry beans and cucurbits and has potential for use with a variety of other crops. Sonalan provides dependable season-long weed control and degrades rapidly enough to enable farmers to safely plant most other crops in the fall or in the following year. Sonalan also fits a wide variety of tillage practices.

A new fungicide, Rubigan,® received its first U.S. registration in late 1984 and will be introduced this year. Rubigan, which is already sold for numerous crops in many other countries, will initially be marketed in the U.S. for use on turf and ornamental plants. Elanco is seeking additional U.S. registrations, particularly for use on apples, pecans, and grapes.

Flexidor,™ a new herbicide for cereal crops, made its first entry into world markets in the United Kingdom in 1984. Additional introductions are planned for 1985. The product is currently under evaluation in the U.S. and Canada for use with cereals and other crops. Beam,® a fungicide for treating rice blast disease, continued to show good unit growth, particularly in South Korea. It remains the leading rice blasticide in Taiwan.

Worldwide sales of animal products were 4 percent below the previous year; however, certain products continued to perform well. Rumensin,® a product that enhances feed-efficiency and growth in beef cattle, was the growth leader among animal products. Rumensin had





an excellent year in the United States, increasing in dollar sales and unit volume.

Worldwide dollar sales of Tylan,® a product for disease control and growth promotion in swine, cattle, and poultry, declined slightly in 1984 despite an increase in unit volume. Domestically, Tylan recorded good sales in the cattle market. International sales were adversely affected by the strong dollar, which offset unit growth in parts of Asia and Latin America.

Elanco remained the world's leading supplier of anticoccidial products even though sales of Coban,® which were adversely affected by competitive products, declined. Growth by Monteban,® a newer anticoccidial, partially compensated for the Coban sales loss. New markets were opened to Monteban when it was introduced in Brazil, Italy, Denmark, South Africa, central and eastern Europe, and Australia.

Compudose,® a growth-promotion implant for cattle, achieved good results abroad. Its overall sales potential was expanded with an introduction in South Africa. Introductions are planned in several more countries in 1985.

The goal of the agricultural research program is the discovery and development of products that will enable farmers and ranchers to produce crops and livestock more efficiently and profitably. Presently, fifteen new compounds are being field-tested as potential new agricultural products. Research capabilities have been greatly extended by the application of recombinant DNA technology, which has permitted our scientists to gain greater insight into the physiology of plants and animals, as well as enabling our company to produce new biochemical compounds for evaluation as potential new products. In addition, as in other areas of research, our in-house efforts are being complemented by the acquisition of specific technologies from outside sources.

In plant science research, an increased emphasis was placed on the discovery of new chemical entities. As a result, in 1984 several series of new compounds were identified for evaluation as potential herbicides, insecticides, fungicides, and plant growth regulators.

In animal science research, our scientists have developed a new system for continuous delivery of compounds to cattle and other ruminant animals. The new device is placed in the animal's rumen, where it delivers active ingredient for several months. The system can work with



many substances that require constant administration over a long period of time. It will be especially useful with animals, such as pasture cattle, that are not closely confined and thus do not usually receive regular feed supplements.

Field studies are progressing well on avilamycin, a very effective growth-promotant for swine and poultry. It improves the efficiency of feed utilization and thereby enhances the rate of growth. Work also continues on actaplanin, a compound under evaluation for increasing the efficiency of milk production in dairy herds and meat production in beef cattle.

Our animal scientists are also working with a new antibiotic for the treatment of bacterial pneumonia in calves and young pigs. Calves will receive the drug by injection, while pigs will receive it for two to four weeks as a feed additive. Bacterial pneumonia is a major disease problem with the young of both species.

The company has recently developed recombinant DNA manufacturing procedures for bovine somatotropin, a protein that increases milk production in dairy cattle. With sufficient supplies now available, our scientists will also evaluate other potential uses.

Cosmetics

Elizabeth Arden worldwide sales reached a record level in 1984 despite increased competition, a weak retail environment, and adverse currency comparisons that reduced foreign sales. Sales for the year totaled $323 million, an increase of 5 percent over 1983. Worldwide sales were reduced by 3 percent, or $10 million, due to the strong dollar.

The sales performance was primarily the result of successful new product launches and solid growth of the fine fragrance products Chloé,® KL,® and Lagerfeld™ for Men. Sales of Visible Difference® Lip-Fix® creme declined on a worldwide basis in 1984, while other treatment and make-up lines experienced modest growth.

Two new products from Arden research were introduced in 1984, further expanding the Arden line. Visible Difference Eye-Fix® Primer with Primilin III,™ introduced in April, stops eye make-up from creasing and



fading and brings moisture to the delicate eye area. Lip Fitness Color,™ a moisturizing lipstick balm, was introduced in May.

Two innovative computer systems, the Beauty Makeover Computer and the Skin Imaging Computer, were introduced in late summer. Developed by Arden research and appearing at major U.S. department stores, the computer systems will be used more extensively in 1985 and should generate increases in make-up and skin-care sales.

The Beauty Makeover Computer, known as "Elizabeth,™" allows a make-up artist to work with a video image of the customer rather than actually applying cosmetics to her face. The computer speeds up the makeover process and permits the artist to create a variety of different looks on the video screen.

The second system, the Skin Imaging Computer, uses the latest surface-scanning technology to produce the first objective analysis of skin texture. After determining the skin's condition, the computer recommends appropriate Arden products to improve texture and appearance.

Arden entered the hair-care market with the acquisition in May of Philip Kingsley Products, Inc. The Kingsley line consists of a group of hair-care products that includes shampoos, conditioners, scalp treatments, and products for sun protection sold primarily in department stores. Hair-care products comprise the largest segment of the overall market for cosmetics and toiletries.

Major changes during the year in manufacturing and distribution abroad should lead to improved operating efficiency. However, expenses associated with the changes affected the rate of growth in operating profit, which increased only 1 percent compared with last year.

Elizabeth Arden continued to expand its research effort during 1984. The ongoing basic programs on the biochemistry and physical properties of skin were enlarged to look at the effects of aging and sun, not only on the skin's outer layers, but also on the deeper layers. The goal of all of these programs is to create skin-care and make-up products that offer tangible and scientifically proven benefits to consumers.



Contents

Consolidated Statements of Income

Eli Lilly and Company and Subsidiaries

(Dollars in millions, except per-share data) Year Ended December 31	1984	1983	1982
Net Sales	$3,109.2	$3,033.7	$2,962.7
Operating costs and expenses:			
Manufacturing costs of products sold	1,128.4	1,103.2	1,129.1
Research and development	341.3	293.6	267.4
Marketing	643.2	634.9	619.5
General administrative	252.0	277.1	275.8
	2,364.9	2,308.8	2,291.8
Operating Income	744.3	724.9	670.9
Other income (deductions):			
Interest income	73.4	59.9	50.2
Interest expense	(48.8)	(42.1)	(40.1)
Interest expense capitalized	5.7	8.6	13.4
Foreign exchange losses	(7.4)	(7.8)	(18.5)
Other—net	3.5	11.3	8.3
Income Before Taxes	770.7	754.8	684.2
Income taxes	280.5	297.4	272.4
Net Income	$ 490.2	$ 457.4	$ 411.8
Earnings Per Share— on average number of shares outstanding	$6.73	$6.13	$5.42

See notes to consolidated financial statements.

Consolidated Statements of Changes in Financial Position

Eli Lilly and Company and Subsidiaries

(Dollars in millions)	Year Ended December 31	1984	1983	1982
Funds from Operations	Net income	$490.2	$457.4	$411.8
	Depreciation and amortization	120.7	98.3	83.1
	Other noncash charges to income—net	184.4	55.7	36.3
		795.3	611.4	531.2
	Working capital (increases) decreases:			
	Receivables	(29.9)	18.0	8.1
	Inventories	(.3)	30.3	20.9
	Prepaid expenses	(54.0)	(29.2)	(5.1)
	Accounts payable and accrued liabilities	(77.6)	49.8	19.4
		(161.8)	68.9	43.3
	Disposals of property and equipment	8.2	11.1	5.0
	Total Funds from Operations	641.7	691.4	579.5
Funds Used in Operations	Additions to property and equipment	205.3	199.9	236.6
	Net assets of acquired business	81.9	—	—
	Increase in other assets	88.9	32.7	108.9
	Translation adjustments	23.5	14.7	19.5
	Net Funds Except Financing	242.1	444.1	214.5
	Cash Dividends Paid	216.8	205.6	197.5
Funds Provided by (Used for) Financing	Issuances under stock plans	14.8	11.9	8.0
	Other credits to additional paid-in capital	.4	.8	.4
	Purchase of common stock for treasury	(221.6)	(166.2)	(16.5)
	Issuance of treasury stock in acquisition	79.4	—	—
	Increase in loans payable	36.1	60.9	36.6
	Additions to long-term debt	49.9	51.0	5.6
	Reductions of long-term debt	(30.0)	(9.7)	(10.0)
	Net Funds Provided by (Used for) Financing	(71.0)	(51.3)	24.1
	Increase (Decrease) in Funds	(45.7)	187.2	41.1
	Cash and short-term securities at beginning of year	491.0	303.8	262.7
	Cash and Short-Term Securities at End of Year	$445.3	$491.0	$303.8

See notes to consolidated financial statements.

CONSOLIDATED BALANCE SHEETS

Eli Lilly and Company and Subsidiaries

(Dollars in millions)	December 31	1984	1983
Assets	*Current Assets*		
	Cash and short-term securities	$ 445.3	$ 491.0
	Accounts receivable, net of allowances of $25.6 (1984) and $25.2 (1983)	560.4	543.9
	Other receivables	72.9	57.5
	Inventories	630.2	628.0
	Prepaid expenses	118.7	109.7
	Total Current Assets	1,827.5	1,830.1
	Other Assets		
	Investments—at cost	192.0	128.3
	Goodwill, net of allowances for amortization of $7.1 (1984) and $5.4 (1983)	87.4	12.6
	Sundry	256.6	230.2
		536.0	371.1
	Property and Equipment		
	Land	35.2	32.9
	Buildings	674.2	625.4
	Equipment	1,294.8	1,182.6
		2,004.2	1,840.9
	Less allowances for depreciation	723.8	628.3
		1,280.4	1,212.6
		$3,643.9	$3,413.8

Liabilities and Shareholders' Equity

December 31	1984	1983
Current Liabilities		
Loans payable	$ 342.6	$ 306.5
Accounts payable	114.8	107.2
Employee compensation	135.6	132.1
Dividends payable	57.3	53.3
Other liabilities	194.7	238.2
Income taxes payable	107.8	151.0
Deferred income taxes	114.4	—
Total Current Liabilities	1,067.2	988.3
Long-Term Debt	116.6	90.7
Deferred Income Taxes	238.9	213.8
Shareholders' Equity		
Preferred stock—without par value:		
Authorized shares: 5,000,000		
Issued shares: None		
Common stock—par value $.62½ per share:		
Authorized shares: 200,000,000		
Issued shares: 76,263,067	47.7	47.7
Additional paid-in capital	128.7	135.5
Retained earnings	2,497.0	2,227.6
Currency translation adjustments	(155.8)	(113.6)
	2,517.6	2,297.2
Less cost of common shares in treasury:		
1984—4,714,643; 1983—2,772,075	296.4	176.2
	2,221.2	2,121.0
	$3,643.9	$3,413.8

See notes to consolidated financial statements.

(Dollars in millions, except per-share data)

Summary of Significant Accounting Policies

Principles of Consolidation
The accounts of all wholly owned subsidiaries are included in the consolidated financial statements.

Inventories
Substantially all of the inventories located in the continental United States are stated at the lower of cost, determined by the last-in, first-out (LIFO) method, or market. Other inventories are stated at the lower of cost, determined by the first-in, first-out (FIFO) method, or market.

Property and Equipment
Property and equipment is stated on the basis of cost. Provisions for depreciation of buildings and equipment are computed generally by the straight-line method at rates based on their estimated useful lives.

Income Taxes
Federal income taxes are provided on the portion of the income of foreign subsidiaries that is expected to be remitted to the United States and be taxable. The investment tax credit is applied as a reduction of federal income taxes by the flow-through method.

Retirement Plans
Pension costs charged to income generally are actuarially computed and include normal cost, interest on unfunded prior service cost, and amortization of the unfunded prior service cost over forty years. Generally, pension costs accrued are funded.

Acquisition

On May 31, 1984, the company acquired all the outstanding shares of Advanced Cardiovascular Systems, Inc. (ACS), which designs, manufactures, and markets coronary angioplasty catheter systems. This transaction has been accounted for as a purchase and the financial statements include the results of operations of ACS from the date of acquisition. Pro forma results of operations are not shown since the effect would not be material. The purchase price, including a subsequent contingent payment, consisted of 1,342,391 shares of Lilly common stock with a market value of approximately $79.4 million. Depending upon the annual performance of ACS over the next four years, up to 604,200 additional shares of Lilly common stock may be issued in connection with the acquisition. The excess of cost over the fair value of the assets acquired (goodwill) is being amortized over forty years on the straight-line method.

Inventories

The company uses the dollar-value LIFO method for approximately 60 percent of its total inventories. However, it is not practicable to present the components of inventory on a LIFO basis. Inventories at December 31, 1984 and 1983, consisted of the following:

	1984	1983
Finished products	$254.5	$245.3
Work in process	235.9	211.7
Raw materials and supplies	207.7	246.3
	698.1	703.3
Less reduction to LIFO cost	67.9	75.3
	$630.2	$628.0

Investments

Investments classified as noncurrent consist primarily of interest-bearing deposits and short-term securities held in Puerto Rico in connection with tax-exemption grants. These investments are carried at approximately market.

Borrowings

Loans payable represent amounts due to banks for short-term borrowings (generally unsecured) and commercial paper of $186 million at December 31, 1984, and $134 million at December 31, 1983. At December 31, 1984, unused lines of credit approximated $480 million. Compensating balances and commitment fees are not material, and there are no significant conditions under which the lines may be withdrawn.

At December 31, 1984, long-term debt consisted of $46.7 million of bonds, sold through banks in Switzerland, with an effective interest rate approximating 9 percent and maturing in 1996. Long-term debt also included $27.4 million ($24.3 million at December 31, 1983) of industrial revenue bonds bearing interest at rates averaging 7 percent, maturing at various dates to 2013. In addition, the company has capitalized lease obligations and several unsecured loans and real estate mortgage notes due in installments to 2001 and bearing interest at various rates to 15 percent. Long-term debt is payable (in millions of dollars): 1985—$22.3; 1986—$28.5; 1987—$4.8; 1988—$6.1; 1989—$1.1.

Income Taxes

Following is the composition of income taxes:

	1984	1983	1982
Current:			
Federal	$ 40.7	$157.4	$155.2
Foreign	45.0	55.7	58.8
State	6.6	28.9	28.6
Deferred:			
Accelerated depreciation	27.8	24.7	25.2
Installment sales	101.0	—	—
Employee benefit plan	18.9	20.8	—
Product-liability insurance	18.7	2.9	(1.7)
Other timing differences	21.8	7.0	6.3
Income taxes	$280.5	$297.4	$272.4

Unremitted earnings of foreign subsidiaries that have been, or are intended to be, permanently reinvested for continued use in foreign operations, exclusive of those amounts that if remitted would result in little or no income taxes due to relevant statutes currently in effect, aggregated approximately $318 million at December 31, 1984 ($328 million at December 31, 1983).

Following is a reconciliation of the effective income tax rate:

	1984	1983	1982
United States federal statutory tax rate	46.0%	46.0%	46.0%
Add (deduct):			
Tax savings from operations in Puerto Rico	(6.4)	(5.1)	(3.9)
Investment tax credit	(1.3)	(1.5)	(2.4)
Research tax credit	(1.2)	(1.0)	(.9)
Effect of international operations	(2.1)	(.6)	(2.5)
State taxes, net of federal tax benefit	1.9	2.3	2.4
Sundry	(.5)	(.7)	1.1
Effective rate	36.4%	39.4%	39.8%

Following is the composition of income before taxes:

	1984	1983	1982
United States	$622.8	$598.4	$515.0
Foreign	151.2	159.0	168.9
Eliminations and adjustments	(3.3)	(2.6)	.3
Income before taxes	$770.7	$754.8	$684.2

Amounts of income before taxes shown in the preceding table are classified based on location of the operations of the company. Amounts shown in the first table of this note are classified based on location of the taxing authority.

Proposed deficiencies of income taxes totaling $34.2 million for 1971 through 1973 were contested in the Tax Court in September, 1981; no decision has been rendered. Proposed deficiencies totaling $24.4 million for 1974 and 1975 are likewise being contested in the Tax Court. The company has also received from the Internal Revenue Service statutory notices of proposed deficiencies totaling $28.5 million for 1976 and 1977 and $54.8 million for 1978 and 1979. The proposed deficiencies relate primarily to subsidiary operations in Puerto Rico, and for 1975 through 1979 to certain other issues. In the opinion of the company, additional taxes that may ultimately result from these proposed deficiencies, and from possible proposed deficiencies related to the same issues for years subsequent to 1979, would not have a material adverse effect on the consolidated financial statements.

Stock Plans

Stock options and performance awards have been granted to officers and other executive and key employees. Stock options are granted at prices equal to 100 percent of the fair market value at the dates of grant. Stock option activity during 1984 and 1983 is summarized below.

	Number of Shares	
	1984	1983
Unexercised at January 1	2,158,238	2,253,025
Granted	529,350	72,268
Assumed in acquisition	75,902	—
Exercised	(119,751)	(119,975)
Terminated	(80,161)	(47,080)
Unexercised at December 31	2,563,578	2,158,238
Exercisable at December 31	1,480,475	1,087,745

The per-share price range of unexercised options at December 31, 1984, was $3.15 to $69.75 ($37.38 to $69.75 at December 31, 1983). Options were exercised at prices ranging from $3.15 to $63.13 in 1984 ($16.43 to $63.13 in 1983). Option prices below $37.38 relate to options assumed in acquisitions.

Exercise of all outstanding options and the issuance of shares in satisfaction of performance awards would have no material effect upon earnings per share. At December 31, 1984, additional options, performance awards, stock appreciation rights, or restricted stock grants may be granted under the Lilly Stock Plan for not more than 3,568,246 shares (1983—23,300 shares).

Changes in Shareholders' Equity

	Common Stock Issued		Additional Paid-in	Common Stock in Treasury	
	Shares	Amount	Capital	Shares	Amount
Balance at January 1, 1982	76,026,401	$47.5	$123.9	46,063	$ 2.8
Purchase for treasury				300,000	16.5
Exercise of stock options	60,879	—	2.4		
Acquired upon exercise of stock options				5,843	.3
Satisfaction of performance awards	101,020	.1	5.8		
Other credits			.4		
Balance at December 31, 1982	76,188,300	47.6	132.5	351,906	19.6
Purchase for treasury				2,575,000	166.2
Exercise of stock options	74,767	.1	2.3	(45,208)	(2.8)
Acquired upon exercise of stock options				13,786	.9
Satisfaction of performance awards			(.1)	(123,409)	(7.7)
Other credits			.8		
Balance at December 31, 1983	76,263,067	47.7	135.5	2,772,075	176.2
Purchase for treasury				3,560,400	221.6
Acquisition of subsidiary			(7.1)	(1,342,391)	(86.5)
Exercise of stock options			(2.2)	(119,751)	(7.4)
Acquired upon exercise of stock options				21,968	1.4
Satisfaction of performance awards			2.1	(177,658)	(8.9)
Other credits			.4		
Balance at December 31, 1984	76,263,067	$47.7	$128.7	4,714,643	$296.4

Cash dividends declared were $3.05 per share ($220.8 million) in 1984, $2.825 per share ($209.6 million) in 1983, and $2.60 per share ($197.3 million) in 1982.

Currency Translation Adjustments

Generally, the assets and liabilities of foreign operations are translated into U.S. dollars using the current exchange rate. For those operations, changes in exchange rates generally do not affect cash flows; therefore, resulting translation adjustments are made to shareholders' equity rather than to income. Following is an analysis of currency translation adjustments reflected in shareholders' equity:

	1984	1983	1982
Balance (negative amount) at January 1	$(113.6)	$ (84.8)	$(45.6)
Translation adjustments and gains and losses from intercompany transactions	(31.9)	(25.8)	(43.5)
Allocated income taxes	(10.3)	.2	4.3
Liquidation of investment	—	(3.2)	—
Balance at December 31	$(155.8)	$(113.6)	$(84.8)

Retirement Benefits

Defined benefit retirement plans cover substantially all United States employees and a majority of the employees in other countries. Amounts charged to income for retirement plans were approximately $54.3 million for 1984, $51.7 million for 1983, and $49.4 million for 1982.

The amounts of accumulated plan benefits and plan net assets for the company's domestic defined benefit plans are presented below:

January 1	1984	1983
Actuarial present value of accumulated plan benefits:		
Vested	$545.2	$475.1
Nonvested	60.4	59.4
	$605.6	$534.5
Net assets available for benefits	$554.9	$470.3

The assumed rate of return used in determining the actuarial present value of accumulated plan benefits was 7 percent, except that in both years the actual rate of return of 15.5 percent was used on approximately $50 million of assets dedicated to benefit payments.

Actuarial present value of accumulated plan benefits and net assets available for benefits are generally not determined annually for the company's retirement plans in countries other than the United States. Estimated vested benefits of these plans as of January 1, 1984, did not exceed fund assets.

In addition to providing pension benefits, the company and its subsidiaries provide certain health care and life insurance benefits for retired employees. Substantially all of the company's employees in the United States, and employees in certain other countries, become eligible for those benefits upon retirement. The cost of retiree health care and life insurance benefits is recognized as expense as claims are paid. Those costs totaled $6.9 million in 1984.

Leases

Total rental expense for all leases, including contingent rentals (not material), amounted to approximately $36.4 million for 1984, $39.4 million for 1983, and $40.2 million for 1982. Capital leases included in equipment in the consolidated balance sheet totaled $37.5 million at December 31, 1984, and $29.8 million at December 31, 1983. Future minimum rental commitments are not material.

Litigation

The company is party to various pending legal actions, including private antitrust and product liability litigation. The product liability litigation includes suits that seek to establish a right to recover substantial damages from the company and certain other drug companies for injuries allegedly suffered by young women whose mothers took diethylstilbestrol (a prescription drug) during pregnancy. The product liability litigation also includes suits that seek substantial damages for injuries, including death, allegedly caused by benoxaprofen, an anti-arthritis drug. While it is not feasible to predict or determine the outcome of such actions, in the opinion of the company such actions will not ultimately result in liability that would have a material adverse effect on the company's consolidated financial position.

Industry Segments and Foreign Operations

The following industry segment and foreign operation information has been approximated, using, for certain operating expenses and identifiable assets not directly traceable to the company's industry segments or foreign operations, allocation methods that are considered reasonable to comply with the requirements for segmental reporting.

Industry Data

	1984	1983	1982
Net Sales—to unaffiliated customers			
Human Health	$2,028.9	$1,999.7	$1,891.1
Agriculture	756.9	727.3	789.0
Cosmetics	323.4	306.7	282.6
Net Sales	$3,109.2	$3,033.7	$2,962.7
Operating Profit			
Human Health	$ 669.1	$ 657.5	$ 529.0
Agriculture	107.7	97.9	146.9
Cosmetics	37.1	36.8	31.0
Total Operating Profit	813.9	792.2	706.9
Corporate expenses	(62.4)	(51.2)	(46.2)
Interest expense	(43.1)	(33.5)	(26.7)
Interest income	62.3	47.3	50.2
Income Before Taxes	$ 770.7	$ 754.8	$ 684.2
Identifiable Assets			
Human Health	$1,961.0	$1,767.1	$1,694.3
Agriculture	773.1	792.2	837.8
Cosmetics	200.1	174.4	181.3
Corporate	709.7	680.1	441.7
Total Assets	$3,643.9	$3,413.8	$3,155.1
Depreciation Expense			
Human Health	$ 76.8	$ 62.3	$ 54.4
Agriculture	33.4	28.2	21.8
Cosmetics	5.2	4.0	3.2
Corporate	3.6	3.3	3.1
Total Depreciation Expense	$ 119.0	$ 97.8	$ 82.5
Capital Expenditures			
Human Health	$ 157.6	$ 143.6	$ 169.7
Agriculture	32.5	45.5	56.9
Cosmetics	9.7	5.1	6.5
Corporate	5.5	5.7	3.5
Total Capital Expenditures	$ 205.3	$ 199.9	$ 236.6

The company is engaged in the discovery, development, manufacture, and sale of products in three principal industries: human health, agriculture, and cosmetics.

The human health segment includes pharmaceuticals, medical instrument systems, and miscellaneous human health products. Pharmaceuticals include analgesics, an antiarthritis agent, antibiotics, antidiabetic agents, cardiovascular drugs, hematinics, hormones, oncolytic agents, sedatives, vitamins, and other pharmaceuticals for human use. Medical instrument systems include patient vital-signs measurement and monitoring systems, intravenous-fluid delivery and control systems, enteral feeding systems, implantable cardiac pacemakers, an ambulatory insulin-infusion pump, cardiac defibrillators and monitors, and coronary angioplasty catheter systems.

The agriculture segment includes agricultural chemicals and animal health products. Agricultural chemicals are principally herbicides for controlling weeds in various crops. Animal health products include a nonhormonal cattle feed additive that improves feed efficiency and growth, an antibiotic for promoting feed efficiency and growth in swine, anticoccidial agents for use in broilers and layer replacements, and other products for livestock and poultry.

The cosmetics segment includes the Elizabeth Arden line, Parfums Lagerfeld products, Burberrys products, and Kingsley hair-care products. The Elizabeth Arden line includes skin-care preparations, make-up products, and fragrances. Parfums Lagerfeld products are marketed under the trademarks Chloé, Lagerfeld, and KL and include fragrance and toiletry products. Burberrys products include fragrance and toiletry products.

Intersegment sales are not material.

Corporate assets consist primarily of securities and interest-bearing cash deposits.

Geographic Data

	1984	1983	1982
Net Sales			
United States			
Sales to unaffiliated customers	$2,103.3	$2,000.8	$1,897.3
Transfers to other geographic areas	320.5	291.1	283.5
	2,423.8	2,291.9	2,180.8
Europe and Middle East			
Sales to unaffiliated customers	678.0	693.9	727.1
Transfers to other geographic areas	109.1	85.4	73.4
	787.1	779.3	800.5
Other			
Sales to unaffiliated customers	327.9	339.0	338.3
Transfers to other geographic areas	106.9	127.5	95.6
	434.8	466.5	433.9
Eliminations—transfers between geographic areas	(536.5)	(504.0)	(452.5)
Net Sales	$3,109.2	$3,033.7	$2,962.7
Income Before Taxes			
United States	$ 622.8	$ 598.4	$ 515.0
Europe and Middle East	104.3	98.3	101.0
Other	45.2	58.8	48.3
Eliminations and adjustments	(1.6)	(.7)	19.9
Income Before Taxes	$ 770.7	$ 754.8	$ 684.2
Total Assets			
United States	$2,976.7	$2,658.1	$2,423.8
Europe and Middle East	729.2	738.0	681.4
Other	245.5	255.3	255.3
Eliminations and adjustments	(307.5)	(237.6)	(205.4)
Total Assets	$3,643.9	$3,413.8	$3,155.1

Transfers between geographic areas are made at prices that, in general, are calculated to reflect a profit attributable to manufacturing operations.

Net assets relating to operations outside the United States amounted to approximately $465 million at the end of 1984 and $515 million at the end of 1983. Remittances to the United States are subject to various regulations of the respective governments as well as to fluctuations in exchange rates.

Report of Independent Accountants

Ernst & Whinney

Board of Directors and Shareholders
Eli Lilly and Company
Indianapolis, Indiana

We have examined the consolidated balance sheets of Eli Lilly and Company and subsidiaries as of December 31, 1984 and 1983, and the related consolidated statements of income and changes in financial position for each of the three years in the period ended December 31, 1984. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the consolidated financial position of Eli Lilly and Company and subsidiaries at December 31, 1984 and 1983, and the consolidated results of their operations and changes in their financial position for each of the three years in the period ended December 31, 1984, in conformity with generally accepted accounting principles applied on a consistent basis.

Ernst & Whinney

Indianapolis, Indiana
February 7, 1985

Responsibility for Financial Statements

Eli Lilly and Company and Subsidiaries

The preceding consolidated financial statements, including the notes thereto, have been prepared by the company in accordance with generally accepted accounting principles and necessarily include amounts based on judgments and estimates by management. The other financial information in this annual report is consistent with that in the financial statements.

The financial statements have been audited by Ernst & Whinney, independent accountants, whose report appears above. Their responsibility is to examine the company's financial statements in accordance with generally accepted auditing standards and to express their opinion with respect to the fairness of presentation of the statements.

The company maintains internal accounting control systems that are designed to provide reasonable assurance that assets are safeguarded, that transactions are executed in accordance with management's authorization and are properly recorded, and that accounting records are adequate for preparation of financial statements and other financial information. The design, monitoring, and revision of internal accounting control systems involve, among other things, management's judgments with respect to the relative cost and expected benefits of specific control measures.

The members of the Audit Committee of the Board of Directors, none of whom are employees of the company, are identified on page 58 of this annual report. The Audit Committee recommends independent accountants for appointment by the Board of Directors, reviews the services to be performed by the independent accountants, and receives and reviews the reports submitted by them. It also determines the duties and responsibilities of the internal auditors, reviews the internal audit program, and receives and reviews reports submitted by the internal auditing staff. In the exercise of its responsibilities the Audit Committee meets with management, with the internal auditors, and with the independent accountants.

Financial Summary

Nineteen hundred and eighty-four marked the twenty-fourth consecutive year that Eli Lilly and Company achieved increased sales and earnings. The growth in 1984 was attained despite increased competition, hospital cost-containment efforts, and the adverse effect of foreign currency exchange rates. The growth in earnings enabled the company to maintain its strong financial condition.

Worldwide sales increased 2 percent in 1984, the same percentage growth as in 1983. The 1984 sales increase was due principally to a 4-percent increase in unit volume, partially offset by adverse currency fluctuations, which reduced sales by approximately 2 percent. In 1983, the sales increase was due principally to price increases, since unit volume remained essentially level. The 1983 sales were also reduced by approximately 2 percent as the result of the strong dollar.

Net income in 1984 increased 7 percent over the previous year, following an increase of 11 percent in 1983.

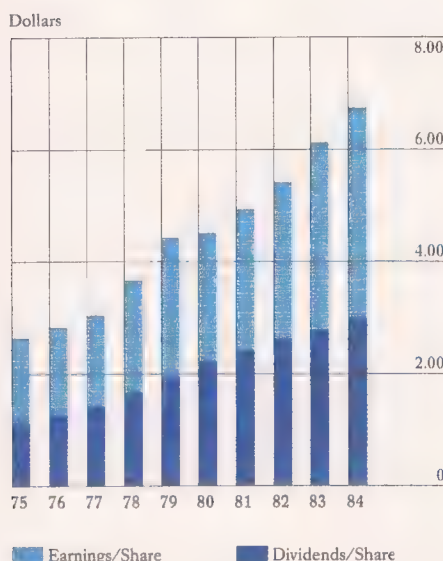
Earnings per share for the year totaled $6.73, an increase of 10 percent over $6.13 in 1983. The 1983 earnings per share represented a 13-percent increase over $5.42 in 1982. Of the 1984 earnings, $2.975 per share was paid out as dividends to shareholders. This was the one hundredth consecutive year that the company has made dividend payments to its shareholders and the seventeenth consecutive year in which the dividend rate has been increased.

Net income in both 1984 and 1983 benefited from improved productivity. Due to significant improvements in manufacturing operations, manufacturing costs in 1984 increased at a slower rate than sales. In 1983, manufacturing costs actually decreased 2 percent.

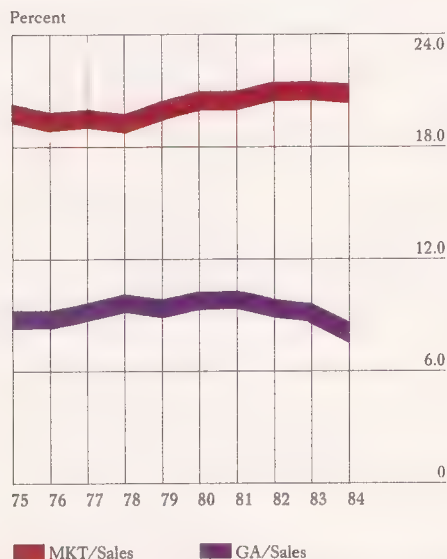
Aggressive expense controls in 1984 continued to hold down total operating expenses, which increased only 3 percent over 1983. Careful management of general administrative expenses resulted in a 9-percent decrease from the 1983 level. Expenses benefited from a reduction in the accrual for product-liability costs, aiding 1984 second-quarter earnings by approximately 12 cents per share. Marketing expenses in 1984 increased only 1 percent. In 1983, total operating expenses increased only 4 percent over 1982.

The company significantly increased its funding of research and development programs, which are paramount to its long-term success. Worldwide research and development expenses grew 16 percent in 1984 to $341 million, up from $294 million in 1983 and $267 million in 1982. This larger investment in research and

Earnings per Share and Dividends per Share



Marketing and General Administrative Expenses as Percent of Sales



development represented 11 percent of 1984 sales, up from 10 percent in 1983 and 9 percent in 1982.

Again in 1984, careful management of treasury activities produced higher interest income and reduced foreign exchange losses. The company has achieved a reduction in its effective tax rate to 36.4 percent, a 3.0-point reduction from the 1983 rate and a 3.4-point reduction from the 1982 rate. The lower effective rate is due principally to increased manufacturing operations in Puerto Rico and Ireland.

The net effect of the company's cost and expense management programs has been a rate of earnings growth in excess of the rate of sales increases over the last two years. As a result, the return on sales from consolidated operations grew to 15.8 percent in 1984, up from 15.1 percent in 1983 and 13.9 percent in 1982. Return on shareholders' equity was 22.6 percent, compared with 21.9 percent in 1983 and 20.9 percent in 1982. Return on assets remained level with 1983 at 13.9 percent, up from 13.6 percent in 1982.

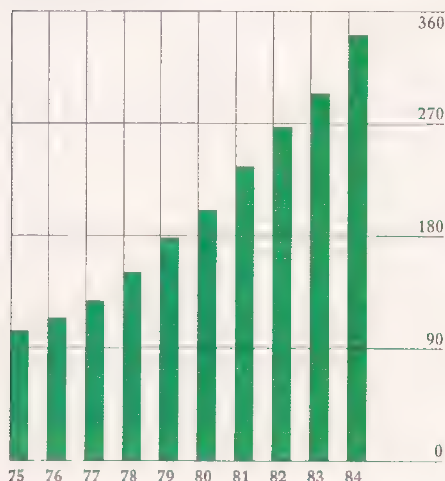
An important aspect of providing for long-term growth is investment in property and equipment. Financed primarily by cash from operations, the company has invested more than $640 million in capital projects during the last three years: $205 million in 1984, $200 million in 1983, and $237 million in 1982. The major 1984 expenditures were in connection with the new biomedical research building and a pilot plant for the development of recombinant DNA manufacturing procedures. Investment in capital projects in 1985 is expected to continue at approximately the same level as that of the past three years.

Analysis by Industry Segment

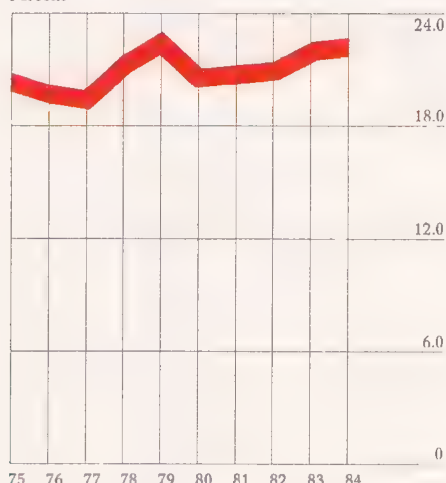
Sales of *human health* products increased 1 percent in 1984, following a 6-percent increase in 1983. Within the human health segment, sales of pharmaceutical products increased 1 percent in 1984. Sales of oral antibiotics showed good growth; however, sales of injectable antibiotics, reflecting the impact of cost management efforts by U.S. hospitals, declined from 1983 levels. Sales of pharmaceuticals other than antibiotics continued to show good growth. In 1983, sales of pharmaceutical products increased 7 percent over 1982. Sales of both oral and injectable antibiotics increased in 1983. Medical instrument systems sales grew 9 percent in both 1984 and 1983.

Sales of *agriculture* products increased by 4 percent in 1984, reversing an 8-percent decline in 1983. In 1984, unit sales increases were partially offset by price reductions, principally of the herbicide Treflan, and adverse

Research and Development Expenses



Return on Equity



currency fluctuations.

Within the agriculture segment, sales of agricultural chemicals increased by 12 percent over 1983, due primarily to increased sales of the herbicide Treflan and the introduction of a new herbicide, Sonalan. Sales of agricultural chemicals declined by 13 percent in 1983 due primarily to a decline in the sales of Treflan. The unit volume of the herbicide was significantly reduced as a result of the U.S. government's Payment-in-Kind (PIK) program, which reduced the acreage planted in soybeans, cotton, sunflowers, and spring wheat. Sales in both 1984 and 1983 were adversely affected by price reductions of Treflan. The price reductions were designed to provide increased value to growers and to enhance the herbicide's competitive position after its patent expires in September, 1985. Worldwide sales of animal health products declined 4 percent in 1984, following a 2-percent decline in 1983.

The 5-percent growth in sales in the *cosmetics* segment in 1984 was attributable primarily to sales of fragrance products. The growth in 1983 sales of 9 percent was attributable to Visible Difference Lip-Fix, the designer fragrance for women KL, and skin-care products.

International Operations

Sales of the company's foreign operations have declined as a percentage of consolidated sales in recent years: 32 percent in 1984, 34 percent in 1983, and 36 percent in 1982. This decline has been due in large part to the continued strengthening of the U.S. dollar against most foreign currencies, which has resulted in the translation of foreign affiliates' financial statements into fewer U.S. dollars. The adverse impact of currency fluctuations alone reduced 1984 sales abroad by some $63 million, more than offsetting an increase in unit volume. This is a continuation of the trend that began in 1980. In addition, price controls by foreign governments have limited the company's ability to increase prices, particularly in the human health segment, to offset the adverse effect of devaluations and the increased cost of operations.

Further information on industry segments and international operations is on pages 44 to 46.

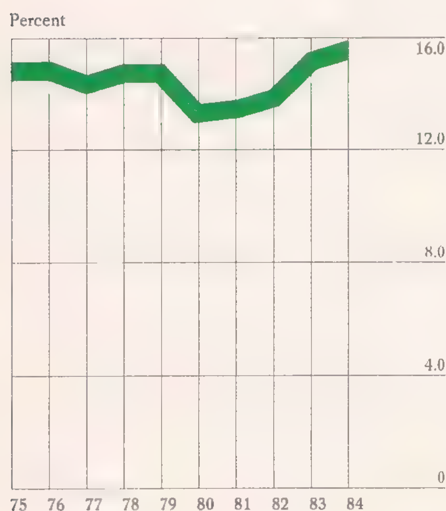
Inflation

Rates of inflation in 1983 and 1984 were generally lower than in recent years. The effects of inflation on company operations are reflected further on pages 52 and 53.

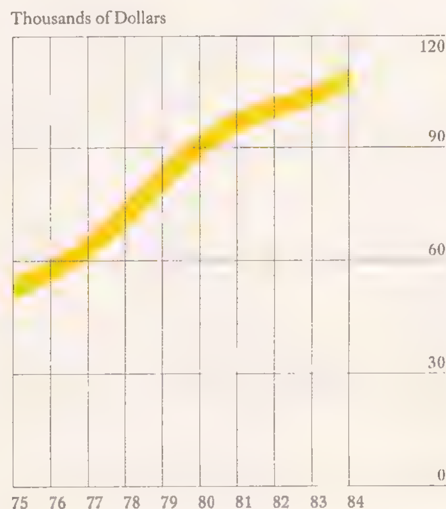
Financial Condition

In 1984 the company maintained a very sound financial position. At year-end, cash and short-term securities

Return on Sales



Net Sales per Employee



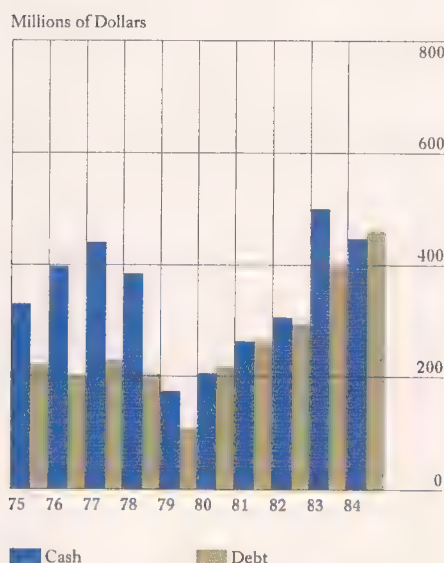
amounted to $445 million, compared with $491 million at the end of 1983 and $304 million at year-end 1982. The 1984 year-end cash position was affected by the purchase of approximately 3.5 million shares of common stock to be held for use in future acquisitions and for other purposes. Under a program announced last October, at year-end the company had authority to purchase, under certain terms and conditions, up to an additional 2.2 million shares of its common stock.

Cash generated from the company's operations in 1984 provided, as it has in the past, the primary source of funds needed for working capital requirements, payment of dividends, and the capital spending programs that support the basic growth of the business. Total debt increased to $459 million from $397 million in 1983. Total indebtedness in 1982 was $295 million. Total debt as a percent of equity was 20.7 percent in 1984, compared with 18.7 percent a year earlier. The percentage was 14.4 in 1982. Short-term debt was $343 million, compared with $306 million at year-end 1983. At year-end 1982, short-term debt was $246 million.

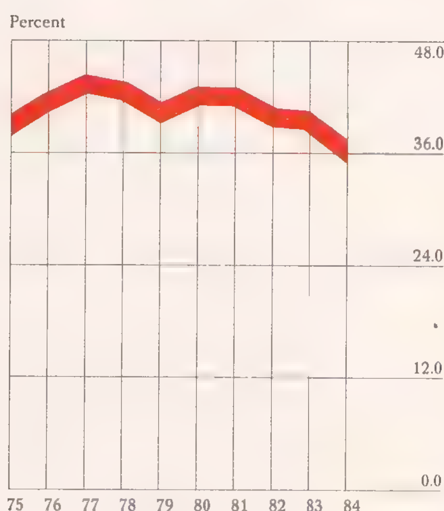
The company's favorable financial condition continues to be an important factor in achieving sustained earnings growth and an excellent return on investment.

The company considers its liquidity condition to be favorable. As measures of its liquidity, the company can point to its ability to generate cash from operations, its high return on equity, a low debt-to-equity ratio, a substantial short- and long-term debt capacity, and the highest ratings from both Moody's and Standard & Poor's. Thus, through cash generated from operations, its debt capacity, and other external financing alternatives, the company has the ability and the flexibility to meet its obligations and to undertake future business expansion.

Cash and Debt



Effective Tax Rate



Inflation and Changing Prices

In recent years inflation has affected the company's production costs in varying degrees in the areas of the world in which manufacturing is performed, although the dominant impact has been in the United States, where a majority of production costs are incurred. In most years, the company has been able to compensate for input cost increases by improvements in productivity and by selling-price increases.

The replacement of buildings and equipment will usually require a substantially greater capital investment than was required to purchase the assets that are being replaced. The additional capital investment reflects principally the cumulative impact of inflation on the long-lived nature of these assets.

The schedules on the following page quantify the effects of inflation on the primary historical-dollar financial statements. Dollar amounts of inventories and property and equipment (and related manufacturing costs of products sold and depreciation expense) are restated to amounts that approximate the current cost of the items, thereby measuring the impact of inflation in terms of changes in specific prices. The current cost for property and equipment, and the related depreciation expense, is based principally on external price indexes closely related to the items being measured. The current cost of inventories reflects recent purchase and production costs. The current manufacturing costs of products sold reflect current cost at the time the sales were recorded. Adjustments to current cost information, including amounts measured in functional currencies other than the U.S. dollar, to reflect the effects of general inflation, are based on the United States Consumer Price Index for All Urban Consumers published by the Bureau of Labor Statistics.

It is important to recognize the inherent limitations in this information. It reflects only the estimated effect of changing prices (1) on inventories and property and equipment and related manufacturing costs of products sold and depreciation expense and (2) on monetary assets and liabilities. It ignores any technological improvements or efficiencies that would normally be associated with replacement of production capacity.

No adjustments to or allocations of the amounts of income tax expense were made in the computation of the supplemental information shown below. The effective tax rate for 1984 was 36.4 percent on a historical cost basis and 39.2 percent restated for current cost.

The aggregate amount of depreciation and amortization expense for 1984 was $120.7 million on a historical cost basis and $181.7 million restated for current cost.

Income from Continuing Operations Adjusted for Changing Prices

(In average 1984 dollars)

(Dollars in millions) Year Ended December 31, 1984	As Reported in the Primary Statements	Adjusted for Changes in Specific Prices (Current Costs)
Net sales	$3,109.2	$3,109.2
Manufacturing costs	1,128.4	1,151.4
Operating expenses	1,236.5	1,269.3
Operating income	744.3	688.5
Other income (deductions) — net	26.4	26.4
Income before taxes	770.7	714.9
Income taxes	280.5	280.5
Income from continuing operations	$ 490.2	$ 434.4
Loss from decline in purchasing power of net monetary assets		$ (8.8)
Increase in specific prices (current costs) of inventories and property and equipment held during the year*		$ 125.0
Effect of increase in general price level		94.6
Excess of increase in specific prices over increase in general price level		$ 30.4
Translation adjustment for year		$ (113.2)

*At December 31, 1984, current cost of inventory was $709 million and current cost of property and equipment, net of accumulated depreciation, was $1,780 million.

Five-Year Comparison of Selected Supplementary Financial Data Adjusted for Effects of Changing Prices

(In average 1984 dollars)

(Dollars in millions, except per-share data)	1984	1983	1982	1981	1980
Net sales	$3,109.2	$3,163.2	$3,188.5	$3,167.5	$3,225.5
Income from continuing operations	434.4	408.0	376.3	364.4	369.1
Income from continuing operations per common share	$ 5.96	$ 5.46	$ 4.96	$ 4.79	$ 4.88
Excess (deficit) of increase in specific price level over increase in general prices	$ 30.4	$ .6	$ 92.7	$ (123.2)	$ (73.8)
Loss from decline in purchasing power of net monetary assets	(8.8)	(9.0)	(7.4)	(16.5)	(33.3)
Translation adjustment for year	(113.2)	(79.0)	(102.8)	(54.2)	—
Net assets at year-end	2,767.8	2,774.1	2,846.3	2,671.8	2,703.8
Cash dividends declared per common share*	$ 3.05	$ 2.95	$ 2.79	$ 2.79	$ 3.49
Cash dividends paid per common share	2.975	2.87	2.79	2.71	2.77
Market price per common share at year-end	65.08	59.33	61.18	61.18	76.76
Average Consumer Price Index	311.1	298.4	289.1	272.4	246.8

*Includes dividends declared in the current year, payable in the following year.

Product Sales— By Industry Segments

The table below shows by industry segments the products from which consolidated sales for the last three years were derived.

(Dollars in millions) Year Ended December 31	1984	1983	1982
Human Health			
Pharmaceutical products:			
Injectable antibiotics	$ 445.1	$ 500.0	$ 493.6
Oral antibiotics	532.7	508.9	450.3
Other pharmaceuticals	686.3	636.9	591.3
Total pharmaceuticals	1,664.1	1,645.8	1,535.2
Medical instrument systems	309.2	284.0	259.8
Miscellaneous	55.6	69.9	96.1
Totals	2,028.9	1,999.7	1,891.1
Agriculture			
Agricultural chemicals	423.0	377.9	433.8
Animal health products	333.9	349.4	355.2
Totals	756.9	727.3	789.0
Cosmetics	323.4	306.7	282.6
Net sales	$3,109.2	$3,033.7	$2,962.7

The products shown in the preceding table are described on page 45. The company distributes pharmaceutical products principally through wholesale distributing outlets to physicians, dentists, pharmacies, and hospitals. Agricultural chemicals and animal health products are marketed by separate sales forces to wholesale distributors, retailers, manufacturers, processors, and producers. Cosmetic products are sold by a separate sales force directly to selected department stores and drugstores and in Elizabeth Arden salons.

Selected Quarterly Data

(Dollars in millions, except per-share data)

	1984				1983			
	Fourth	Third	Second	First	Fourth	Third	Second	First
Net sales	$777.9	$712.6	$723.9	$894.8	$753.1	$708.1	$740.6	$831.9
Manufacturing costs of products sold	270.1	254.3	265.4	338.6	274.8	248.3	278.1	302.0
Operating expenses	327.2	292.0	288.0	329.3	307.6	286.3	302.0	309.7
Income before taxes	174.8	175.4	182.0	238.5	180.0	174.7	169.2	230.9
Net income	117.8	111.7	114.0	146.7	115.4	103.9	101.9	136.2
Earnings per share	1.64	1.53	1.56*	2.00	1.57**	1.40	1.36	1.80
Dividends paid per share	.80	.725	.725	.725	.725	.725	.65	.65
Common stock prices								
High	67⅝	60⅞	66⅛	65⅜	68⅜	63⅞	67½	66⅝
Low	56⅜	53	56⅝	58⅛	56¾	59¾	59½	56½

*Includes income of 12 cents per share resulting from a reduction of accrual for uninsured losses based on a favorable court ruling (now on appeal) regarding insurance coverage for DES product-liability cases.

**Includes income of 17 cents per share resulting from (a) disposal of a foreign subsidiary and (b) revisions in estimates of accrued expenses.

First-quarter dividends are declared in December of the preceding year. It is the present intention of the Board of Directors to continue to consider quarterly the payment of a cash dividend, the payment and amount thereof to be dependent on the net earnings, financial condition and requirements of the company, and other relevant considerations.

The company's common stock is listed on the New York Stock Exchange. The number of shareholders of record as of December 31, 1984, was 29,000.

Selected Financial Data

Eli Lilly and Company and Subsidiaries

	(Dollars in millions, except per-share data)	1984	1983
Operations	Net sales	$3,109.2	$3,033.7
	Operating costs and expenses	2,364.9	2,308.8
	Other income (deductions)—net	26.4	29.9
	Income taxes	280.5	297.4
	Net income	490.2	457.4
	Dividends declared	220.8	209.6
	Dividends paid	216.8	205.6
	Earnings retained	269.4	247.8
	Earnings per common share	$ 6.73	$ 6.13
	Dividends declared per common share	3.05	2.825
	Dividends paid per common share	2.975	2.75
	Average common shares outstanding (thousands)	72,855	74,624
Financial Position	Current assets	$1,827.5	$1,830.1
	Current liabilities	1,067.2	988.3
	Working capital	760.3	841.8
	Other assets	536.0	371.1
	Property and equipment	1,280.4	1,212.6
	Total assets	3,643.9	3,413.8
	Long-term debt	116.6	90.7
	Deferred income taxes	238.9	213.8
	Shareholders' equity	2,221.2	2,121.0
Financial Ratios	Net income as a percent of sales	15.8%	15.1%
	Turnover of average total assets	.88	.92
	Return on average total assets	13.9%	13.9%
	Return on average shareholders' equity	22.6	21.9
	Effective tax rate	36.4	39.4
	Research and development as a percent of sales	11.0	9.7
	Net sales per employee (thousands)	$ 108.3	$ 103.9
	Current ratio	1.7	1.9
	Long-term debt as a percent of total capitalization	5.0%	4.1%
Statistical Data	Research and development expenses	$ 341.3	$ 293.6
	Capital expenditures	205.3	199.9
	Depreciation and amortization	120.7	98.3
	Number of employees	28,700	29,200
	Number of shareholders	29,000	28,200

1982	1981	1980	1979	1978	1977	1976	1975	1974
$2,962.7	$2,773.2	$2,558.6	$2,250.8	$1,882.6	$1,550.2	$1,360.8	$1,233.7	$1,111.5
2,291.8	2,156.6	1,993.3	1,709.3	1,411.0	1,152.5	1,021.3	940.9	823.8
13.3	29.4	25.0	17.7	13.1	(3.2)	6.6	8.7	12.1
272.4	271.5	248.3	225.5	206.0	171.0	143.4	117.5	123.7
411.8	374.5	342.0	333.7	278.7	223.5	202.7	184.0	176.1
197.3	186.2	208.8						
197.5	180.4	165.3	142.1	116.5	99.0	86.9	76.0	67.0
214.5	188.3	133.2	191.6	162.2	124.5	115.8	108.0	109.1
$ 5.42	$ 4.93	$ 4.52	$ 4.43	$ 3.70	$ 3.07	$ 2.87	$ 2.66	$ 2.55
2.60	2.45	2.775						
2.60	2.375	2.20	1.95	1.65	1.42	1.25	1.10	.97
75,934	75,942	75,645	75,298	75,286	72,854	70,535	69,091	69,015
$1,680.5	$1,665.4	$1,537.7	$1,317.0	$1,318.0	$1,218.8	$1,071.5	$ 949.3	$ 849.4
873.6	817.8	738.8	535.0	600.1	494.9	451.3	432.2	386.8
806.9	847.6	798.9	782.0	717.9	723.9	620.2	517.1	462.6
339.0	230.7	220.8	209.5	193.3	46.6	50.5	43.7	44.8
1,135.6	1,006.2	849.0	679.7	556.1	513.0	473.7	443.5	371.2
3,155.1	2,902.3	2,607.5	2,206.2	2,067.4	1,778.4	1,595.7	1,436.5	1,265.4
49.4	53.8	32.9	8.2	6.3	4.2	19.6	11.5	5.6
176.6	142.4	100.7	78.4	67.4	55.3	36.6	28.3	20.8
2,055.5	1,888.3	1,735.1	1,584.6	1,393.6	1,224.0	1,088.2	964.5	852.2
13.9%	13.5%	13.4%	14.8%	14.8%	14.4%	14.9%	14.9%	15.8%
.98	1.01	1.06	1.05	.98	.92	.90	.91	.97
13.6%	13.6%	14.2%	15.6%	14.5%	13.2%	13.4%	13.6%	15.4%
20.9	20.7	20.6	22.4	21.3	19.3	19.7	20.3	22.2
39.8	42.0	42.1	40.3	42.5	43.4	41.4	39.0	41.3
9.0	8.5	7.8	7.9	8.0	8.2	8.4	8.5	8.4
$ 101.1	$ 97.0	$ 91.1	$ 82.4	$ 72.4	$ 63.5	$ 57.7	$ 52.4	$ 45.1
1.9	2.0	2.1	2.5	2.2	2.5	2.4	2.2	2.2
2.3%	2.8%	1.9%	.5%	.4%	.3%	1.8%	1.2%	.7%
$ 267.4	$ 234.8	$ 200.7	$ 177.7	$ 150.2	$ 127.0	$ 114.0	$ 104.3	$ 93.3
236.6	253.7	230.7	176.2	90.2	84.8	68.5	107.6	82.1
83.1	69.2	56.7	49.2	45.4	42.2	36.3	31.0	28.1
29,300	28,600	28,100	27,300	26,000	24,400	23,600	23,500	24,700
28,800	30,100	31,000	29,800	31,400	32,100	28,100	23,100	22,500

Corporate Organization

Board of Directors

Richard D. Wood
Chairman of the Board, President, and Chief Executive Officer

Thomas H. Lake
Vice Chairman of the Board; Retired Company President

Edwin F. Alder, Ph.D.
Vice President, Lilly Research Laboratories

Steven C. Beering, M.D.
President, Purdue University

C. Harvey Bradley, Jr.
Vice President and General Counsel

Vaughn D. Bryson
Group Vice President

Raymond E. Crandall
Group Vice President

Earl B. Herr, Jr., Ph.D.
President, Lilly Research Laboratories

J. Clayburn La Force, Jr., Ph.D.
Dean of Graduate School of Management, University of California at Los Angeles

Mel Perelman, Ph.D.
President, Eli Lilly International Corporation

Cornelius W. Pettinga, Ph.D.
Executive Vice President

Robert C. Seamans, Jr., D.Sc.
Senior Lecturer, Department of Aeronautics and Astronautics, Massachusetts Institute of Technology

Eugene L. Step
President, Pharmaceutical Division

C. William Verity, Jr.
Director and former Chairman of the Board, Armco, Inc.

Alva O. Way
Chairman of the Finance Committee, The Travelers Corporation

J. Richard Zapapas
Group Vice President

Committees of the Board of Directors

Audit Committee

Alva O. Way,
Chairman

Steven C. Beering, M.D.

J. Clayburn La Force, Jr., Ph.D.

Thomas H. Lake

Compensation Committee

Thomas H. Lake,
Chairman

Robert C. Seamans, Jr., D.Sc.,
Vice Chairman

J. Clayburn La Force, Jr., Ph.D.

C. William Verity, Jr.

Alva O. Way

Executive Committee

Richard D. Wood,
Chairman

Vaughn D. Bryson

Raymond E. Crandall

Earl B. Herr, Jr., Ph.D.

Mel Perelman, Ph.D.

Cornelius W. Pettinga, Ph.D.

Eugene L. Step

J. Richard Zapapas

Nominating Committee

C. William Verity, Jr.,
Chairman

Steven C. Beering, M.D.

Robert C. Seamans, Jr., D.Sc.

Richard D. Wood

Senior Management

Richard D. Wood
Chairman of the Board, President, and Chief Executive Officer

Cornelius W. Pettinga, Ph.D.
Executive Vice President

Edwin F. Alder, Ph.D.
Vice President, Lilly Research Laboratories

C. Harvey Bradley, Jr.
Vice President and General Counsel

Vaughn D. Bryson
Group Vice President

Eurelio M. Cavalier
Group Vice President, Sales, Pharmaceutical Division

Marvin Cave
Vice President, Industrial Relations Division

James M. Cornelius
Vice President, Finance, and Treasurer

Raymond E. Crandall
Group Vice President

Edgar G. Davis
Vice President, Corporate Affairs Division

Earl B. Herr, Jr., Ph.D.
President, Lilly Research Laboratories

Irving S. Johnson, Ph.D.
Vice President, Lilly Research Laboratories

Thomas A. Klingaman
Senior Vice President, Production Planning and Corporate Services

James H. Lake
Senior Vice President, Production Operations and Services

E. Walter Lange
Group Vice President, Marketing Planning and Development, Pharmaceutical Division

Mel Perelman, Ph.D.
President, Eli Lilly International Corporation

Edward R. Roberts
Executive Vice President, Eli Lilly International Corporation

Joseph F. Ronchetti
President, Elizabeth Arden, Inc.

Eugene L. Step
President, Pharmaceutical Division

John G. Whitney, Ph.D.
Vice President, Lilly Research Laboratories

J. Richard Zapapas
Group Vice President

Corporate Information

Annual Meeting

The annual meeting of shareholders will be held at the Indianapolis Civic Theatre, 1200 West 38th Street, Indianapolis, on Monday, April 15, 1985. Formal notice of the meeting, together with the proxy statement and form of proxy, will be mailed to each holder of common stock.

Corporate Headquarters

Lilly Corporate Center
Indianapolis, Indiana 46285
(317) 261-2000

10-K Report

The company's Annual Report to the Securities and Exchange Commission on Form 10-K will be available in April. A copy may be obtained without charge by any shareholder upon request to the company's shareholder services department at the corporate headquarters address shown above.

Transfer Agent and Registrar

Chemical Bank, New York
Co-Transfer Agents: Merchants National Bank & Trust Company of Indianapolis and Continental Illinois National Bank and Trust Company of Chicago
Co-Registrars: American Fletcher National Bank and Trust Company, Indianapolis, and Harris Trust and Savings Bank, Chicago

Dividend Investment and Cash Purchase Plan

A Dividend Investment and Cash Purchase Plan is available to Lilly shareholders.

Shareholders using this service can automatically invest their dividend payments in additional shares of common stock of the company without the usual fees involved in purchasing stock. The plan also offers shareholders the opportunity to make additional purchases of Lilly stock with cash payments to a maximum of $1,000 per month.

For information and an authorization card to start the Plan, please direct your written inquiry to:

Eli Lilly and Company
Shareholder Services Department
Lilly Corporate Center
Indianapolis, Indiana 46285

Stock Listings

Eli Lilly and Company common stock is listed on the New York Stock Exchange and on the stock exchanges of Zurich, Basel, and Geneva.

NYSE ticker symbol: LLY

Trademarks in Annual Report

Astra™ *(multiprogrammable cardiac pacemaker, Cardiac Pacemakers)*
Beam® *(tricyclazole, Elanco)*
Betatron® *(ambulatory infusion pump, Cardiac Pacemakers)*
Ceclor® *(cefaclor, Lilly)*
Chloé® *(fragrance, Lagerfeld)*
Coban® *(monensin sodium, Elanco)*
Compudose® *(estradiol controlled-release implant, Elanco)*
Darvon® *(propoxyphene hydrochloride, Lilly)*
Delta™ *(heart pacemaker pulse generator, Cardiac Pacemakers)*
Dobutrex® *(dobutamine hydrochloride, Lilly)*
Eldisine® *(vindesine sulfate, Lilly)*
Elizabeth™ *(beauty makeover computer, Elizabeth Arden)*
Eye-Fix® *(eye primer creme, Elizabeth Arden)*
Flexidor™ *(isoxaben, Elanco)*
Humulin® *(human insulin of recombinant DNA origin, Lilly)*
Keflex® *(cephalexin, Dista)*
Kefzol® *(cefazolin sodium, Lilly)*
KL® *(fragrance, Lagerfeld)*
Lagerfeld™ *(fragrance, Lagerfeld)*
Lifepak® *(heart monitor and defibrillator, Physio-Control)*
Lifestat® *(noninvasive blood pressure monitor, Physio-Control)*
Lip Fitness Color™ *(skin protectant lipstick, Elizabeth Arden)*
Lip-Fix® *(lip treatment creme, Elizabeth Arden)*
Mandol® *(cefamandole nafate, Lilly)*
Monteban® *(narasin, Elanco)*
Moxam® *(moxalactam disodium, Lilly)*
Nebcin® *(tobramycin sulfate, Dista)*
Oncovin® *(vincristine sulfate, Lilly)*
Primilin III™ *(skin treatment ingredient, Elizabeth Arden)*
Rubigan® *(fenarimol, Elanco)*
Rumensin® *(monensin sodium, Elanco)*
Sonalan® *(ethalfluralin, Elanco)*
Treflan® *(trifluralin, Elanco)*
Tylan® *(tylosin, Elanco)*
Vancocin® HCl *(vancomycin hydrochloride, Lilly)*
Velban® *(vinblastine sulfate, Lilly)*
Visible Difference® *(refining moisture-creme complex, Elizabeth Arden)*
VSM® *(vital-signs monitor, Physio-Control)*